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BULLETIN

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JULY 15, 1947

NUMBER 24

COLLEGE OF EDUCATION

ISSUE FOR
1947 - 1948
SESSIONS

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COLLEGE OF EDUCATION

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THE OHIO STATE UNIVERSITY
COLUMBUS

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| CALENDAR FOR 1947 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|----|----|----|----|----|----|---|----------|----|----|----|----|----|----|---|----------|----|----|----|----|----|----|---|----------|----|----|----|----|----|----|----|--|--|--|
| THE FRANKLIN D. ROOSEVELT LIBRARY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| JANUARY | | | | | | | | FEBRUARY | | | | | | | | MARCH | | | | | | | | APRIL | | | | | | | | | | |
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| SEPTEMBER | | | | | | | | OCTOBER | | | | | | | | NOVEMBER | | | | | | | | DECEMBER | | | | | | | | | | |

| THE CALENDAR FOR 1948 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| JANUARY | | | | | | | FEBRUARY | | | | | | | MARCH | | | | | | | APRIL | | | | | | | |
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| MAY | | | | | | | JUNE | | | | | | | JULY | | | | | | | AUGUST | | | | | | | |
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| SEPTEMBER | | | | | | | OCTOBER | | | | | | | NOVEMBER | | | | | | | DECEMBER | | | | | | | |
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| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 19 | 20 | 21 | 22 | 23 | 24 | | |

UNIVERSITY CALENDAR

1947

SUMMER QUARTER

| | |
|---------------------------|---|
| June 16 | Orientation Program for all new students begins. |
| June 16 | Latest day for registration and payment of fees before classes begin. |
| June 17 | Classes begin, 8:00 A. M. |
| July 4 | Independence Day. No classes. |
| July 22, 23 | Final Examinations, first term (at last regular class hour). |
| July 23 | First term ends, 12 Midnight. |
| July 24 | Second term begins, 8:00 A. M. |
| August 25, 26, 27, 28, 29 | Final Examinations. |
| August 29 | Summer Convocation (Commencement), 9:00 A. M. |
| August 29 | Summer Quarter ends, 12 Midnight. |

AUTUMN QUARTER

| | |
|-----------------------------|---|
| September 24-29 | Orientation Week for all new students. |
| September 29 | Latest day for registration and payment of fees before classes begin. |
| September 30 | Classes begin, 8:00 A. M. |
| November 11 | Armistice Day. No classes. |
| November 27, 28, 29 | Thanksgiving Vacation. |
| December 15, 16, 17, 18, 19 | Final Examinations. |
| December 19 | Autumn Convocation (Commencement), 2:00 P. M. |
| December 19 | Autumn Quarter ends, 12 Midnight. |

1948

WINTER QUARTER

| | |
|--------------------------|---|
| January 2 | Orientation Program for all new students begins. |
| January 3 | Latest day for registration and payment of fees before classes begin. |
| January 5 | Classes begin, 8:00 A. M. |
| February 22 | Washington's Birthday. |
| March 15, 16, 17, 18, 19 | Final Examinations. |
| March 19 | Winter Convocation (Commencement), 2:00 P. M. |
| March 19 | Winter Quarter ends, 12 Midnight. |

SPRING QUARTER

| | |
|----------------------|---|
| March 29 | Orientation Program for all new students begins. |
| March 29 | Latest day for registration and payment of fees before classes begin. |
| March 30 | Classes begin, 8:00 A. M. |
| May 30 | Memorial Day. No classes. |
| June 6 | Baccalaureate Sermon. |
| June 7, 8, 9, 10, 11 | Final Examinations. |
| June 11 | Class Day. |
| June 11 | Spring Convocation (Commencement). |
| June 11 | Spring Quarter ends, 12 Midnight. |
| June 12 | Alumni Day. |

| | |
|-------------|---|
| June 22 | Summer Quarter (1948) classes begin. |
| July 28 | Summer Quarter (1948) first term ends. |
| July 29 | Summer Quarter (1948) second term begins. |
| September 3 | Summer Quarter (1948) ends. |
| October 5 | Autumn Quarter (1948) classes begin. |

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 ROBERT GATRELL, B.Sc., in Edu., M.A. *Associate Professor of Fine Arts*
 DALE V. GILLILAND, B.Sc. in Ed., A.B., M.A. *Associate Professor of Music*
 ALAN F. GRIFFIN, B.Sc. in Edu., Ph.D. *Associate Professor of Education*
 GEORGE E. HARDESTY, B.Mus., M.Mus. *Associate Professor of Music*
 LOWRY W. HARDING, A.B., M.A., Ph.D. *Associate Professor of Education*
 JAMES G. HAUB, B.S., M.Sc., Ph.D. *Associate Professor of Zoology and Entomology*
 FRIEDA HELLER, A.B., B.S.L.S., M.S.L.S., *Associate Professor and Librarian of the University School*
 LEWIS A. HESS, M.A., Ed.D. *Associate Professor of Physical Education*
 MARTHA E. JACKSON, O.T.R., B.S., M.S. in Ed. *Associate Professor of Occupational Therapy*
 JOHN J. KINSELLA, M.A., Ph.D. *Acting Assistant Director of the University School and Associate Professor of Mathematics-Education, University School*
 EVERETT J. KIRCHER, M.A., Ph.D. *Associate Professor of Education*
 WALTER KOB, B.S. in Mus., M.A. *Associate Professor of Music*
 FREDERIC J. KRAMER, M.A., Ph.D. *Associate Professor of German*
 RICHARD C. LARKINS, B.Sc. in Bus.Adm., M.A., *Associate Professor of Physical Education*
 FRANCES MARY MCKENNA, R.N., B.Sc. in Nursing-Education, M.A., *Associate Professor and Director of the School of Nursing*

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| WILLIAM MAC NEVIN, S.B., A.M., Ph.D. | Associate Professor of Chemistry |
| WILLIAM B. MCBRIDE, B.A., B.Mus., M.A. | Associate Professor of Music |
| CHARLES B. MENDENHALL, M.A., Ph.D. | Associate Professor of Education |
| †ARTHUR H. MOEHLMAN, A.M., Ph.D., | Associate Professor of Social Science- Education, University School |
| BERNARD F. MOONEY, B.P.E., B.Sc. in Edu., M.Ed. | Associate Professor of Physical Education |
| ANN PATERSON, B.Sc. in Edu., M.A., Ed.D., | Associate Professor of Physical Education |
| ALICE DONNELLY PRESSEY, B.S., A.M., | Associate Professor of Home Economics |
| VICTOR RAIMY, M.A., Ph.D. | Associate Professor of Psychology |
| WILL RANNELLS | Associate Professor of Fine Arts |
| A. SOPHIE ROGERS, M.A., Ph.D., M.D. | Associate Professor of Psychology |
| WILDA ROSEBROOK, M.A., Ph.D., | Associate Professor of Education in the Bureau of Special and Adult Education |
| JULIAN ROTTER, M.A., Ph.D. | Associate Professor of Psychology |
| FRANK SEIBERLING, A.B. | Associate Professor of Fine Arts |
| MAUDE M. SLAWSON, B.M., M.A. | Associate Professor of Music |
| L. GORDON STALEY, B.P.E., B.Sc. in Edu., M.A., | Associate Professor of Physical Education |
| EMILY LEATHERMAN STODDILL, M.A., Ph.D., | Associate Professor of Psychology |
| CLARENCE E. TAFT, M.S., Ph.D. | Associate Professor of Botany |
| CLOEA C. THOMAS, B.S. in Mus.Edu., M.A. | Associate Professor of Music |
| MANLEY R. WHITCOMB, B.Mus.Edu., M.Mus. | Associate Professor of Music |
| DELOS D. WICKENS, M.A., Ph.D. | Associate Professor of Psychology |
| *MARGARET WILLIS, B.A., M.A., | Associate Professor of Social Science-Educa- tion, University School |
| DOROTHY SUMPTION WIRTHWEIN, B.S., M.A. | Associate Professor of Physical Education |
| NAOMI ALLENBAUGH, B.Sc. in Edu., M.A. | Assistant Professor of Physical Education |
| HELEN W. APPELDOORN, M.A. | Assistant Professor in the Bureau of Special and Adult Education |
| PHILIP B. BLAKESLY, B.Sc. in Edu., M.A. | Assistant Professor of Fine Arts |
| MARJORIE CAMPBELL, B.S. in Ed., M.A. | Assistant Professor of Fine Arts |
| VICTOR COUTANT, M.A., Ph.D. | Assistant Professor, University School |
| MARGARET S. FETZER, B.F.A., M.A. | Assistant Professor of Fine Arts |
| ROBERT FOUNTAIN, B.Mus., M.Mus. | Assistant Professor of Music |
| JEROLD FREDERIC, B.Mus. | Assistant Professor of Music |
| ESTHER A. GILMAN, B.S., M.A. | Assistant Professor of Physical Education |
| J. JUSTIN GRAY, B.M., M.M. | Assistant Professor of Music |
| GENEVA HANNA, M.A., Ph.D. | Assistant Professor, University School |
| LELA HARDY, B.M., B.F.A., M.A. | Assistant Professor of Music |
| ROBERT W. HAWS, B.S. in Edu., M.A. | Assistant Professor of Education |
| WILBUR HELD, B.Mus., M.Mus. | Assistant Professor of Music |
| CHALMER G. HIXSON, Ed.D. | Assistant Professor of Physical Education |
| JOHN E. HORROCKS, A.M., Ph.D. | Assistant Professor of Psychology |
| LELAND JACOBS, M.A., Ph.D. | Assistant Professor of Education |
| OLWEN E. JONES, B.Sc. in Edu., M.A. | Assistant Professor of Music |
| JOHN R. KINZER, A.M., Ph.D. | Assistant Professor of Psychology |
| GERTRUDE KUEHEFUHS, B.S. in Edu., Ed.M. | Assistant Professor of Music |
| ANITA LANDACRE, B.A., M.A. | Assistant Professor of Fine Arts |
| MARY JANE LOOMIS, B.Sc. in Edu., M.A. | Assistant Professor, University School |
| ANTONIO LORA, B.Mus., M.Mus. | Assistant Professor of Music |

* On leave.

† Military Leave.

- JOSEPHINE MACLATCHY, M.A., Ph.D. *Research Associate and Assistant Professor in the Bureau of Educational Research*
- EARL J. MICKLE, Ph.D. *Assistant Professor of Mathematics*
- MIRIAM SMART MOONEY, B.A., M.A. *Assistant Professor of Music*
- *NELLE MORRIS, B.Sc. in Edu., M.A. *Assistant Professor, University School*
- BENJAMIN OWEN, B.Mus., M.Mus. *Assistant Professor of Music*
- JOHN A. RAMSEYER, A.B., M.A. *Acting Director, University School*
- *HESTER ROBINSON, A.B., M.A. *Assistant Professor of Fine Arts*
- EVELYN A. RUPERT, B.Sc. in Ed., M.A. *Assistant Professor of Physical Education*
- NORMAN STAIGER, B.Sc. in Edu., M.Sc. in Edu. *Assistant Professor of Music*
- JENNETTE A. STEIN, B.Sc. in Edu., M.A., *Assistant Professor of Physical Education*
- RICHARD STULTZ, M.A., Ed.D. *Assistant Professor of Physical Education*
- CECILE C. SWALES, A.B., M.A., *Assistant Professor, University School and Teacher in charge of Elementary School*
- HELEN VAN LOON, B.M., M.M. *Assistant Professor of Music*
- BLANCHE VERBECK, B.S., M.A. *Assistant Professor of University School*
- GENEVA WATSON, B.S., M.S. *Assistant Professor of Physical Education*
- WILLIS A. WHITEHEAD, B. of Arch., M.A. *Research Associate and Assistant Professor in the Bureau of Educational Research*
- HOWARD S. WILSON, Mus.B., Mus.M. *Assistant Professor of Music*
- MARY M. YOST, B.A., M.S. *Assistant Professor of Physical Education*
- HELEN P. ALKIRE, B.Sc. in Edu., M.A. *Instructor in Physical Education*
- ELEANOR ANAWALT, B.A. *Instructor in Music*
- KENNETH ARISMAN, B.S., M.A. *Instructor in University School*
- MARY LOUISE BOHNSACK, B.S., M.A. *Instructor in Physical Education*
- KATHRYN BURGESS, B.S., M.A. *Instructor in University School*
- *ROBERT MORRIS COFFIN, B.A., M.A. *Instructor in Fine Arts*
- HERBERT L. COON, A.B., M.A. *Instructor in University School*
- MARION GATRELL, B.Sc. in Edu., M.A. *Instructor in Fine Arts*
- HAZEL GIBBONY, B.A., M.A. *Research Associate and Instructor in the Bureau of Educational Research*
- †RUTH E. HOOK, B.Sc. in Edu., M.A. *Instructor in Physical Education*
- MAURICE HUNT, A.B., M.A. *Instructor in Education*
- DOROTHY VEST HUNTER, B.S. *Instructor in University School*
- ROBERT D. KING, B.F.A., M.A. *Instructor in Fine Arts*
- PHYLLIS KRUMM, B.F.A., M.A. *Instructor in Fine Arts*
- HUGH LAUGHLIN, B.S., A.M. *Instructor in University School*
- DONALD E. MCGINNIS, Mus.B., School Mus. B. *Instructor in Music*
- KATHLEEN MUSTAINE, B.S. *Instructor in University School*
- LYNN NICHOLAS, B.A., M.A. *Research Associate and Instructor in the Bureau of Educational Research; Chairman of the Appointments Division*
- JEANNE ORR, B.S., A.M. *Instructor in University School*
- FLORENCE GREENHOE ROBBINS, Ph.D. *Instructor in Sociology*
- MILDRED SCHMIDT, B.S., M.A. *Instructor in University School*
- MARY TOLBERT, B.S., M.A. *Instructor in University School*
- MARGARET TYLER, B.A., M.A. *Instructor in the Bureau of Educational Research; Supervisor, Ohio School of the Air*
- INEZ RAY WELLS, A.B., M.A. *Instructor in Education*
- CATHARINE M. WILLIAMS, B.S. in Edu., M.A. *Research Associate and Instructor in the Bureau of Educational Research*
- *WILLIAM O. WILLIAMS, A.B. *Instructor in University School*
- H. LOUISE EDMONDSON, A.B., B.S. in L.S. *Librarian*

* On leave.

† Military leave.

THE OHIO STATE UNIVERSITY

LOCATION

The Ohio State University is situated within the corporate limits of the city of Columbus. It is supported by appropriations from the State and Federal governments. The University has 1,800 acres of land with 417 acres in the campus, 383 acres in the University Airport, and 1,000 acres in the farm. The total value of land, buildings, and equipment is \$30,080,940.58.

ORGANIZATION OF THE UNIVERSITY

For convenience of administration the departments of the University are grouped into organizations called Colleges. The Ohio State University comprises ten Colleges and a Graduate School, each under the administration of a Dean and College Faculty, as follows:

Graduate School, College of Agriculture (including the School of Home Economics), College of Arts and Sciences (including the School of Journalism and the School of Optometry), College of Commerce and Administration (including the School of Social Administration), College of Dentistry, College of Education (including the School of Fine and Applied Arts and the School of Music), College of Engineering, (including the School of Mineral Industries), College of Law, College of Medicine (including the School of Nursing), College of Pharmacy, College of Veterinary Medicine.

NOTE: Bulletins describing the work of the several Colleges may be obtained by addressing the University Examiner, The Ohio State University, Columbus, 10, and stating the College in which the writer is interested. (For list of bulletins, see the last page.)

THE UNIVERSITY YEAR—FOUR QUARTERS

The University year is divided into four Quarters, each approximately eleven weeks in length. The Summer Quarter is further divided into two terms of approximately six weeks each. Complete courses that are so announced may be taken for either term or for the entire Quarter.

This *Bulletin* is devoted to the work of the College of Education for the Autumn, Winter and Spring Quarters, 1947-1948. The announcements for the Summer Quarter are printed in the Summer Quarter Bulletin.

JUNIOR DEANS

The Junior Deans are the chief advisers of the Freshmen and Sophomores in all University matters. They keep a close supervision over the work of these students and help them to adjust themselves to their new surroundings.

The Junior Council, consisting of the Junior Deans, Secretaries, and certain other members of the University Faculty under the leadership of the President of the University, have under consideration constantly the problems of providing more satisfactory methods of instruction for the increasing numbers of underclassmen, as well as the problem of adjusting the curricula of the various colleges to meet the varying needs of particular groups of students.

COLLEGE OF EDUCATION

The College of Education exists for the purpose of rendering service of four general types:

First and central is the purpose of preparing teachers and other educational workers upon a professional level;

Second is the purpose of preparing research workers and professional practitioners in non-teaching fields appropriate to the interests of the specialized departments of the College;

Third is the purpose of serving the distinctive purposes and needs of other Colleges of the University in ways appropriate to the obligations, functions, and resources of the College of Education; and

Fourth is the purpose of giving such direct aid to the schools, colleges, social agencies, and people of the State and nation as is appropriate to the special competencies of the members of the College staff.

The College is engaged in the preparation of teachers for the elementary and secondary schools, junior colleges, teachers' colleges, and in the preparation of administrative officers at all these levels. It is engaged in the preparation of artists, of guidance workers, school psychologists, clinical workers, professional musicians, speech and hearing therapists, occupational therapists, curriculum specialists, educational statisticians, testers and evaluators, and workers for many other educational positions. This represents in the thinking of the College not simply a multiplication of activities, but a closely related and interdependent body of purposes, each of which is associated in content and process with the others.

The College defines its responsibility for professional preparation to include the guidance of its students in the selection of experiences suitable to the promotion of their educational purposes. These experiences include courses offered in other Colleges of the University as well as in the College of Education. They also include other types of experience both within and outside the University.

The College regards professional education as comprehending within its scope the development of social and personal attitudes and responsibilities, ethical standards, and ideals of service as well as the development of the knowledge, skills and abilities involved in the technical performance of their jobs. Its programs are, therefore, designed to meet the needs of individuals with respect to all of these factors of competency. It reserves the right to guide out of the College of Education, or to exclude, students who demonstrate their incompetence with respect to any of these qualifications for professional service.

DEPARTMENTS

The College of Education includes: four departments and schools offering undergraduate and graduate instruction—Education, Fine Arts, Music, Psychology; the Department of Occupational Therapy; the University School; the Bureau of Educational Research and the Bureau of Special and Adult Education. The College includes in its curricula courses in all departments of the University which contribute to the education of teachers and of professional workers in the arts, in psychology, and in occupational therapy; Accounting, Agricultural Chemistry, Anatomy, Architecture and Landscape Architecture, Bacteriology, Botany, Business Organization, Ceramic Engineering, Chemical Engineering, Chemistry, Classical Languages and Literature, Economics, Engineering Drawing, English, Geography, Geology, German, History, Home Eco-

nomics, Industrial Engineering, Journalism, Mathematics, Military Science, Nursing, Philosophy, Photography, Physical Education, Physics and Astronomy, Physiology, Political Science, Romance Languages and Literatures, Rural Economics and Rural Sociology, Social Administration, Sociology, Speech, and Zoology and Entomology.

The teacher-education curricula of the College lead to the degree Bachelor of Science in Education. The College confers also the degrees Bachelor of Fine Arts, Bachelor of Music, and Bachelor of Science in Occupational Therapy. The outlines of these curricula are given on pages 95, 81, and 99.

THE UNIVERSITY SCHOOL

The University School is a laboratory in which students in the College of Education may observe and study modern elementary and secondary school practice. The advantages of a close integration of theory and practice are thus secured. Systematic observation is specified as a partial requirement in certain courses as described in this Bulletin. With the permission of the director of the school and by appointment, advanced students in the College of Education or the Graduate School may participate in the study of problems under investigation at the school. The University School consists of work from the kindergarten through the twelfth year. The University School is housed in a modern three-story building on the campus at the corner of Woodruff and High Streets. It is fully equipped to carry on the most progressive educational practices.

THE BUREAU OF EDUCATIONAL RESEARCH

In recognition of the need for research work in the field of education, and in order to serve the public schools of the State whose research problems are especially numerous, the Bureau of Educational Research has been created in the College of Education. Under certain restrictions students enrolled in the various departments of the College of Education may carry work for credit in the Bureau. Graduate students will find the facilities of the Bureau of great assistance. The Bureau maintains an appointments service, a textbook and research library and a teaching aids service for the use of the College and the University. For further description of the Bureau see Departments of Instruction.

THE BUREAU OF SPECIAL AND ADULT EDUCATION

The Bureau of Special and Adult Education is organized to promote the education of all types of exceptional children (the handicapped and the gifted) and to further the work of adult education. See Departments of Instruction for further description of the Bureau.

TEACHER PLACEMENT SERVICE

The Ohio State University maintains a Teacher Placement Service for the convenience of the superintendents and boards of education of the State. Graduates and graduate students of the University are invited to enroll with the Appointments Office. Registration with the Appointments Office is a prerequisite for graduation from the College of Education.

The Placement Service is under the direction of the Bureau of Educational Research. This service is rendered free of charge to the applicants. Graduates of experience who desire to better their locations are invited to communicate with the Appointments Office.

The Appointments Office has available such statistical information that advice and direction may be given in the matter of supply and demand for teachers in various fields.

Superintendents and boards of education are invited to state their needs to the Appointments Office. Prompt attention to all calls is assured.

TWILIGHT SCHOOL COURSES

Students wishing to pursue courses offered at or after five o'clock and on Saturday forenoons may enroll in the University's Twilight School, and should request a copy of the special Twilight School Bulletin. Courses are offered in the Twilight School by the following departments and schools of the College of Education: Education, Fine Arts, Music, and Psychology. These courses have been especially scheduled for the convenience of office workers, teachers, homemakers, factory workers, executives, and other persons whose employment prevents them from attending the University during the day. Fees for enrollment in the Twilight School consists of ten dollars for one course, of fifteen dollars for two courses, plus any special laboratory fee assessed in the particular subject chosen. This fee basis applies only to students taking six hours or less during any one Quarter.

SUMMER QUARTER

Courses offered by the professional departments of the College of Education during the Summer Quarter include most of the courses offered during the year, thus making it possible for teachers in service to complete work for an advanced or the bachelor's degree by attending successive Summer Quarters, and for other students in both the teaching and non-teaching areas to accelerate their programs if they so desire. Practically the entire staff of the professional departments offers instruction during the Summer Quarter.

The Summer Quarter is divided into two terms of equal length. A student may register for either term or for the entire Quarter.

Students desiring information regarding the Summer Quarter should write for the Summer Quarter Bulletin.

LIBRARY FACILITIES

The University Libraries consist of all books owned by the University, and include over 719,300 volumes. The General Library contains the major part of the book collections in the general field of the Humanistic studies. Other important divisions of the book collection, primarily in the field of the sciences, are housed in the other University buildings. A catalogue of the entire collection is maintained in the General Library.

Any person is privileged to use the University collections for reference use within the Library rooms. Only faculty, administrative staff, and registered students of the University may withdraw the books for home use.

The Education Library, on the second floor of Arps Hall, contains a selected collection of works on educational topics, and includes the sets of the most important educational and psychological journals, city and state reports, texts and reference works in the fields of education and psychology. For recreational purposes it also maintains a free collection of recent fiction and non-fiction as well as an up-to-the-minute collection for which there is a charge of three cents a day.

The Reference Division of the Bureau of Educational Research, also on the second floor of Arps Hall, is available to University students. It contains a collection of over 7,000 professional books as well as publications of various agencies concerned with education, which are catalogued according to an intensive subject heading index.

ADMISSION AND REGISTRATION

METHOD OF ADMISSION

The admission of students to the University is in charge of the Entrance Board, which determines the credits that shall be issued on all entrance exam-

inations and certificates, and furnishes all desired information to applicants. Correspondence relating to admission should be addressed to the University Examiner, The Ohio State University, Columbus 10, Ohio.

LIMITATION OF ENROLLMENT

With the present unprecedented enrollment, The Ohio State University has adopted a policy of giving preference in admission to Ohio residents, particularly veterans. In general, only those non-resident students who are exceptionally well qualified at the advanced and graduate levels are being admitted.

ADMISSION TO COURSES LEADING TO A DEGREE

For complete entrance credit, an applicant for admission must be a graduate of a high school of the first grade or obtain credit by examinations covering fifteen entrance units. The College of Education is willing to accept any pattern of units which includes those required by the State Department of Education for graduation from high school. The *Ohio High School Standards* specify a total of sixteen units. These must include three units of English, one unit of science and two units of social studies, including one unit of American history and government. One unit of mathematics is recommended for most pupils. In addition to the major of three units in English, each graduate must have completed one other major of three units and two minors of two units each. The College is particularly desirous, however, that entering students have these skills: ability to read rapidly and with comprehension; command of the fundamentals of effective speech and writing; ability to use arithmetical concepts; effective habits of study.

For certain curricula it is desirable that students have high school preparation as indicated below:

Home economics and physical education—sciences with emphasis on chemistry and biology.

Business education—typing and shorthand.

Fine arts—freehand drawing or design.

Industrial arts—shop and mechanical drawing.

Music—ability to pass entrance examinations; for details see page 69.

Academic teaching fields—all the high school courses closely related to the teaching fields chosen.

Occupational therapy—biology, chemistry, freehand drawing or design. For special procedures and requirements for admission to the curriculum in occupational therapy, see page 99.

ADMISSION WITH ADVANCED STANDING—TRANSFER STUDENTS

An applicant who comes from an approved college and submits through his college registrar an official and explicit transcript describing his entrance credits, his courses of study and scholarship, and giving evidence of good standing, will be admitted to the University, provided he has maintained at least an average scholastic record. If the applicant is deficient in high school units the deficit will be made up from his college credits.

If no high school units are presented, one full year of college credits (forty-five Quarter or thirty semester hours) will be used to satisfy the entrance requirements.

A special application blank for students who desire to enter with advanced standing will be forwarded upon request addressed to the University Examiner's office.

SPECIAL STUDENTS OF MATURE YEARS

A person of mature years who is unable to meet the foregoing entrance requirements in all respects may, under certain circumstances, be permitted to matriculate for specified courses for which he can demonstrate adequate qualifications. The University Examiner is authorized to interpret the phrase "of mature years" to apply to demobilized students not less than nineteen years of age and to modify this interpretation, or apply it to other students, within the spirit of these recommendations. Inquiry concerning such admission should be addressed to the Entrance Board, and to receive consideration must reach the board not less than ten days in advance of the opening of the Quarter.

VETERANS

The United States Veterans Administration has approved the Ohio State University as an institution for training under Public Law 16—Vocational Rehabilitation Act and Public Law 346—the Servicemen's Readjustment Act of 1944 (G.I. Bill of Rights). The University, accordingly, encourages the enrollment of demobilized students and offers its facilities to those qualified for attendance to the full extent of its accommodations in each of its colleges and schools. The rules for admission and continued registration for demobilized students are, in general, the same as those for other students.

The regional office of the Veterans Administration located in Cincinnati, Ohio, has charge of training in Columbus. Veterans desiring information concerning assignment to The Ohio State University for vocational rehabilitation should contact that office or the Veterans Administration office located in the Armory on the campus.

Veterans who have been approved for a period of training under the provisions of the G.I. Bill of Rights should complete their admission and arrange their schedules in the college of their choice in the manner outlined in this bulletin. Upon receipt of the approved schedule and fee card, these cards, together with the Certificate of Eligibility for training issued by the Veterans Administration, should be presented at the Veterans Information Center, Administration Building. There the student will be enrolled as a trainee, and the payment of fees and the issue of books and supplies will be arranged. The Liaison Representative will notify the Veterans Administration of the commencement of training in order that checks covering the subsistence allowance may be sent to the student.

ORIENTATION PROGRAM OF REQUIRED ENTRANCE PROJECTS

All new students in the undergraduate colleges and schools, both Freshmen and those with advanced standing, are expected to take part in a series of orientation projects which are conducted at the opening of the first Quarter of residence. Orientation Programs *exclude* new students entering the Professional Colleges of Dentistry, Law, Medicine, Pharmacy, Veterinary Medicine, and the Graduate School, and transfers with B.A. and B.Sc. degrees entering undergraduate colleges for special programs. Printed instructions for each Quarter will be mailed either by the Registrar's office, with the approved schedule card and fee bill, or by the office handling arrangements for this program. All new students are expected to follow the instructions in this program in every detail. The physical examination and intelligence test are University requirements by rules 151 and 152 respectively. Other tests are essential to assure places in classes and registration will not be considered complete until all *required entrance projects* have been finished.

A dual purpose is served by the orientation program in that the University learns something about its new students and the new students in turn learn something about the University. To learn about its new students, the Univer-

sity conducts a series of tests. These include a complete physical examination, intelligence test, vocational interest test, speech and hearing test, and placement examinations in English, Chemistry, Mathematics, French, German and Spanish. Faculty and college office advisers are available for interviews to discuss the educational plans of new students.

In assisting new students to learn something about the University, provision is made for several formal meetings. These include a student convocation which is addressed by the President. The undergraduate Colleges conduct college meetings where the Dean and other College officers have an opportunity to meet their new students and interpret the college program. The Dean of Women and the Dean of Men conduct conferences where information is presented on the extra-curricular activities of the University. A talk on the history of the University supplies background for understanding a state university and its administrative organization. Social events are included in the general program.

Orientation Programs are planned for each of the four Quarters of the school year. Inquiries about Orientation Week should be addressed to Orientation Program office, William S. Guthrie, Director, University Hall, Room 1 (campus telephone 719.)

QUARTERLY REGISTRATION—PROCEDURE

Under the Quarter plan each student will present his program of studies for official approval, for a single Quarter at a time. Election cards for registration are obtained from the Registrar's Office on the second floor of the Administration Building and are ready for distribution approximately two months prior to the opening of the Quarter. The exact date will be published in the Official Daily Bulletin, and definite days will be announced during which every student in residence will be required to file his program of studies for the following Quarter. Persons who are not in residence may register in person or by mail at any time after the election cards are available for the following Quarter.

Fees may be paid as soon as fee cards have been received by the student from the Registrar. *Students are required to pay their fees each Quarter before the day designated in the University Calendar for classes to begin. Any student who fails to meet this requirement will be assessed a penalty of \$1.00 for each succeeding day or fraction thereof (with a maximum of \$10.00) unless excused by the Registrar. Students should report promptly to their classes on the first day that classes are scheduled.* Students who have registered sufficiently early usually receive fee cards approximately three weeks prior to the opening of the Quarter. *It is to the advantage of all students to register as early as possible.*

Applicants presenting themselves after the opening of the Quarter can be admitted only for exceptional reasons and by action of the Executive Committee of the College. In general, a student who is permitted to enter after the close of the first week of a Quarter will be given a schedule diminished by one full course below the normal requirement for that student.

Schedules of students in the College of Education, except for the first Quarter of registration in the College, must have the signature of assigned advisers before they will be accepted for approval by the College offices.

FEES AND EXPENSES

Registration is not complete until all fees have been paid. No student will have any privileges in the classes or laboratories until all fees and deposits are paid, except under special procedure authorized by the President.

Since all fees are due and payable as a part of the student's registration, before the day designated in the University Calendar for classes to begin, no

person should come to the University for registration without money sufficient to cover all of his fees and deposits.

A penalty of \$1.00 for each succeeding day or fraction thereof (with a maximum of \$10.00) will be assessed for failure to comply with this rule unless excused by the Registrar.

1. Matriculation fee (non-returnable)
Required of every student on first admission to the University.....\$15.00
2. Incidental fees
Incidental fees do not vary with the number of courses taken
Quarter fee for a resident of Ohio..... 30.00
*Quarter fee, including non-resident fee, for a non-resident of Ohio105.00
3. Special fees
 - (a) General Activities Fee 10.00
 - (b) Physical Education Laboratory Fee..... 3.00
Required each Quarter of all students taking gymnasium work. It includes locker and towel service
 - (c) Swimming fee 1.00
Students enrolled in swimming classes are required to pay a Natatorium deposit for the use of bathing suits
 - (d) Laboratory Breakage deposits—amounts vary with the course.....from 1.00 to 20.00
Students are required to pay for all materials consumed in laboratory work. A laboratory deposit for each laboratory course must be made at the time of registration before the student may enter the laboratory. All laboratory supplies are sold to students at the Laboratory Supply Store, Chemistry Building, and charged against the deposits (see page 21). Instructors shall not permit a student to engage in laboratory work unless the student has shown a receipt from the Bursar for the deposit required in the course.
 - (e) Deposit for military uniform for Freshmen (approximately) 28.00

NOTE: When checks given for payment of fees are not paid on presentation at bank, registration will be automatically cancelled and receipts given considered null and void.

*NON-RESIDENTS

Every student who is not a legal resident of the State of Ohio is required to pay a non-resident fee of \$75.00 each Quarter (or \$37.50 each term of the Summer Quarter) of his residence in the University in addition to other University fees. The burden of registering under the proper residence is placed upon the student. If there is any possible question of his right to legal residence the matter should be brought to the attention of the Registrar and passed upon, previous to his registration or payment of fees. Any student who registers improperly under this rule shall be required to pay not only the non-resident fee but shall be assessed a penalty of \$10.00. Students who do not pay this fee within thirty days after they have been notified that the non-resident fee has been assessed against them, will have their registration in the University cancelled.

The rules are as follows:

1. No student shall be considered eligible to register in the University as

a resident of the State of Ohio unless he has had a *bona fide* domicile in the State twelve consecutive months.

2. No student whose domicile was outside the State of Ohio in the year preceding his original enrollment in the University shall be considered a resident unless it can be clearly established by him, that his former domicile has been abandoned and a new domicile established in the State of Ohio and maintained for at least *twelve consecutive months*. No application for resident standing can be considered until the applicant is 22 years of age.

3. No student whose domicile was outside the State of Ohio at any time after his original enrollment in the University shall be considered a resident unless he has established his domicile as stated in paragraph 2.

4. MINORS. The domicile of a minor student shall be considered the same as that of his natural or legal guardian, if any, regardless of emancipation. If an Ohio resident is appointed guardian of a non-resident minor the latter shall be considered a non-resident until twelve months after such appointment.

5. WIVES. The legal residence of wives shall follow that of husbands.

6. The President will exercise his discretion as to the remission of non-resident fees in the cases of:

- a. Children of members of the United States Army, Navy, or Marine Corps, and persons who are orphans or in somewhat similar status.
- b. Non-resident minors for whom an Ohio resident has been appointed guardian.
- c. Aliens.

TEXTBOOKS

Textbooks. Students should not purchase textbooks until they are advised by the instructors of their respective classes.

ROOM AND BOARD

Room and Board. (See Living Arrangements, page 28.)

GRADUATION FEE

No graduation fee is charged for persons receiving a bachelor's degree.

RETURN OF FEES ON WITHDRAWAL

Fees are returnable in case a student withdraws on account of sickness or for other causes entirely beyond his control, if such withdrawal is made during the first thirty days of the Quarter. Students withdrawing under request from the University are not entitled to any return of fees. Permission to withdraw, given in writing by the Dean of the College, must be presented to the Bursar within this thirty-day period. Ordinarily no more than one-half of the fees paid will be refunded. If the case has exceptional circumstances it should be referred to the President for his judgment.

No fees will be returned in case of withdrawal of students until thirty days have elapsed from the date of withdrawal.

If fees are paid under mistake of law or fact they are returnable in full. Fees are not returnable except as provided in this rule.

Laboratory Deposits. If a student is forced to withdraw from a laboratory course during a Quarter, he must first secure permission from his Dean.

No portion of a laboratory deposit of \$5.00 or less shall be returned, unless the course is officially dropped by the student and request for refund presented within thirty days after the payment of the deposit.

On a laboratory deposit of \$6.00 or more the unexpended part of the deposit is returnable if called for on or before the close of the Spring Quarter of the fiscal year in which the deposit has been made.

An order for refund for the unexpended portion of the deposit may be obtained by applying at the Laboratory Supply Store, Chemistry Building. The unexpended part of the deposit will be paid at the Bursar's Office on presentation of the order for refund.

SPECIAL FEES—PENALTIES

PENALTY FOR FAILURE TO KEEP APPOINTMENT FOR PHYSICAL EXAMINATION

A penalty of \$1.00 will be assessed for failure to keep appointment for Physical Examination or for change in date of Physical Examination.

FEE FOR LATE FILING OF ELECTION CARDS

A student who fails to file his election card within the required time (see page 19) must pay a penalty of \$1.00 for each day of delay, the maximum fine being \$5.00.

FEE FOR CHANGES IN APPROVED ELECTION CARDS

Changes in approved election cards will be made only upon the approval of the Dean and the payment of \$1.00 for each change involved unless such payment is waived by the Dean approving the change.

FEE FOR CHANGES IN APPROVED SCHEDULE ASSIGNMENTS

Changes in approved schedule assignments will be made only upon the approval of the Registrar and the payment of \$1.00 for each change involved unless such payment is waived by the Registrar.

COST OF A YEAR'S WORK

One of the most perplexing questions that confronts a prospective student is what the course is going to cost him a year.

The total cost of a year's work—three Quarters, will depend considerably upon the courses pursued. In some courses, such as chemistry, considerable material is used by the student, and this must be paid for by him. The cost of books is an item which varies greatly with courses.

In order to furnish information, there is listed below an estimate of the average payments required by the University for the Freshman year and the estimated cost for room and board at a safe price. These two items are sometimes reduced slightly where two students occupy the same room and where boarding clubs are economically managed. Fees to the University are paid at the beginning of each Quarter.

ESTIMATE OF EXPENSES FOR THE FRESHMAN YEAR

| | |
|--|----------|
| Matriculation Fee (non-returnable)..... | \$ 15.00 |
| Incidental Fee | 90.00 |
| General Activities Fee | 30.00 |
| Physical Education Laboratory Fee..... | 9.00 |
| Deposits to cover laboratory materials and breakage..... | 40.00 |
| Deposit to cover military uniform..... (approximately) | 28.00 |
| Books | 30.00 |
| Room Rent—Men..... | 125.00 |
| Board—Men | 270.00 |
| Room and Board—Women (\$140.00 a Quarter)..... | 420.00 |
| Total (Men) | 637.00 |
| (Women) | 634.00 |

NOTE: In order to meet all the necessary expenses of registration, deposit for uniform, books, and other expenditures incident to securing a room and board, a student should come prepared to spend from \$125 to \$175 during the first ten days of a Quarter. After that period, his board and room rent will constitute the major part of his expenses.

STUDENT PERSONAL EXPENSE FUNDS

The incoming student will save himself much time and trouble by taking a few simple precautions in regard to his personal expense money. The student should bring enough cash to cover all expenses for several days. If he does not wish to carry cash, he should use travelers checks, as they are readily cashed. If he does bring a check, it should be in the form of a bank draft or cashier's check. The student who has a check should not wait until he has spent all his money before cashing the check for it may take several days to collect it. Be sure that any checks that are for the payment of fees are drawn for the exact amount of the fees.

The following facts concerning the cashing of checks should be borne in mind by parents and prospective students:

- (a) The Ohio State University does not cash checks.
- (b) Checks for fees will be accepted by the University, but only when the check is drawn for the exact amount of the fees.
- (c) Banks do not cash checks for strangers unless the check is endorsed by a customer of the bank or some person of known responsibility. This rule applies to cashier's checks, bank drafts, and certified checks.

The student who intends to use a checking account will find that an account in Columbus will be of more value than an account at home or in some other city. An account with a Columbus bank will provide a safe place for depositing funds, will help create a local credit standing, will furnish a means of depositing and cashing checks, and will help the student to understand banking practices.

MILITARY SCIENCE

In accordance with the Morrill Act, passed in 1862, under which the University was established, military instruction must be included in the curricula. The Board of Trustees therefore requires all male students, both special and regular, unless excused by the Department of Military Science, to receive military instruction during the first two years of residence.

The Reserve Officers' Training Corps was established at the University by the War Department to produce junior officers who have the qualities and attributes essential to their progressive and continued development as officers in the Army of the United States. Its program of instruction consists of two parts, the elementary course extending over a period of two years, and the advanced course, extending over a similar period. Instruction is under the direction of officers and non-commissioned officers detailed to the University for that purpose.

Students at this institution, required to receive military instruction, will pursue the elementary course, ROTC, but not necessarily as formally enrolled members of the ROTC. They are eligible for formal enrollment in the ROTC if they are citizens of the United States; physically qualified; regularly enrolled students in the University; over fourteen years of age, and not over twenty-three; and have successfully completed the ROTC general survey test. Admission to the ROTC is voluntary. Two credit hours are allowed for each Quarter of the elementary course. Successful completion of the elementary course, ROTC, is a prerequisite for the advanced course.

All Freshman and Sophomore male students are required to take military training except those enrolled in the Colleges of Dentistry, Law, and Medicine, and in the Naval ROTC. There are certain additional exemptions, to be determined by the Department of Military Science, which are granted for the following reasons:

1. Over twenty-five years of age.
2. Not physically fit for the ROTC.
3. Alien Status.
4. Prior equivalent military training or service.
5. Commissioned officers of the Officers' Reserve Corps, or the National Guard.

Enrollment in Military Science, or formal enrollment in the elementary course, ROTC, has no effect on a student's status under the Selective Service Law, except that the Professor of Military Science may grant certificates of eligibility for entrance to an officer candidate school to those especially qualified students who have:

- (1) Completed the elementary course, ROTC.
- (2) Completed two years of college study.

The elementary course, ROTC, consists of three hours per week of formal instruction of a general type applicable to the Army as a whole and is not specialized as to arm or service except in the case of the Medical course. It extends over a period of two academic years. The advanced course consists of five hours of military instruction, principally of a specialized type applicable to the Field Artillery, Signal Corps, Engineer Corps, Air Force and Chemical Corps. The Medical Corps advanced course includes one hour of formal military instruction and four of required medical subjects. All students formally enrolled in the advanced course, ROTC, must not have reached twenty-seven years of age at the time of enrollment; must execute a written agreement with the government; must have completed the elementary course or its equivalent; and must have been selected by the Professor of Military Science and Tactics and the President of the University.

The service-type uniform is provided for issue to students enrolled in Military Science. At the time the uniform, equipment, and textbooks are issued, the student is required to make a deposit of approximately \$28.00. This deposit is returned to the student when the uniform, and other items issued, have been returned to the Supply Room.

Advanced course students are provided with the officer type uniform and are paid a monetary allowance monthly in lieu of the ration. A student enrolled in the advanced course, ROTC, agrees to complete the course and attend the ROTC summer camp. Students attending ROTC summer camps are messed and quartered and paid at the rate of soldiers of the seventh grade.

Membership in the University Band is open to Freshmen and Sophomores who are selected by the School of Music. The work is conducted jointly by the School of Music and the Department of Military Science. The combined training is conducted so as to enable bandsmen to obtain credit for the two years required military training.

The total credits in this department allowed toward a degree, except for the Medical ROTC, are eighteen, exclusive of the elementary course, required of all male students in the first and second years, for which twelve credit hours are granted. The credits allowed toward a medical degree are one for each Quarter.

Enrollment in the advanced course, Engineer Corps ROTC, will be confined to students taking Architectural, Chemical, Civil, Electrical, Mechanical, Mining, Sanitary or Industrial Engineering. Engineering students who intend to take Electrical Engineering or Electrical Physics, or students majoring in Physics, are eligible for the advanced course Signal Corps, ROTC unit. The advanced course Chemical Corps unit is confined to students taking Mechanical or Chemical Engineering, Accounting, or Law. The Medical Corps ROTC unit is confined to students enrolled in the College of Medicine. Students seeking enrollment in the Air Force ROTC unit, or the Field Artillery ROTC unit may be enrolled in any college except the College of Medicine. Students having successfully completed the advanced course, ROTC, and four years of education at

the University, and who are twenty-one years of age, are eligible for a commission as a second lieutenant in the Officers' Reserve Corps. A professional degree is a requirement for a commission as a first lieutenant in the Medical Corps.

NAVAL SCIENCE

The postwar Naval ROTC was established by Public Law 729 and provides for the selection and training of officer candidates for the Navy and Marine Corps by means of Naval Scholarships in colleges and universities throughout the Country. The purpose of the NROTC is to provide a steady supply of well-educated junior officers for the Line and Staff Corps of the Regular Navy and and Marine Corps, and to build up a reserve of trained officers who will be ready to serve their country at a moments notice in a national emergency. NROTC graduates will be given equal rank, equal treatment and equal opportunities with the graduates of the United States Naval Academy.

Candidates for enrollment in the NROTC as Midshipmen U.S.N.R., are given an examination, conducted annually throughout the nation. The exact date is set each year by the Navy Department. Those men who pass the written examination are then given physical examinations and are interviewed at the Office of Naval Officer Procurement nearest their respective homes and finally are selected by State Selection Committees appointed in each state. The quota of NROTC students under the above plan allotted to each state is in accordance with the state male high school enrollment. The quota for the State of Ohio this year is 143 students.

The general eligibility requirements for enrollment are:

- (a) Be a male citizen of the United States.
- (b) At the time of enrollment, if a minor, have the consent of parent or guardian.
- (c) Agree to accept a commission in the Navy or Marine Corps.
- (d) Agree to remain unmarried while in the college program.
- (e) Be physically qualified.

A candidate must be, not less than seventeen nor more than twenty-one years of age on July 1, preceeding the beginning of the Quarter in which he enrolls. He must be eligible for enrollment in The Ohio State University. Persons already in residence at the University are eligible if they agree to continue an academic course at the undergraduate and/or graduate level for four years after enrollment.

The cost of tuition, fees and textbooks will be paid by the government. Necessary uniforms will be provided by the government, and students will receive retainer pay for other expenses during college at the rate \$600 per year. Normally students will attend college for four years. While in college, they may take any course leading to a baccalaureate or higher degree, but must include therein 36 Quarter hours of Naval Science, plus certain minimum requirements in mathematics, physics and English. They will wear the uniform only when engaged in drills or other Naval Activities prescribed by the Professor of Naval Science, and will be subject to naval discipline only at those times. They will be required to make two summer cruises and take one summer period of aviation indoctrination lasting from six to eight weeks each, and upon graduation must accept a commission as Ensign, USN, or second Lieutenant, USMC. After from fifteen months to two years of active duty, they will be given the option to serve an additional year and to apply for a permanent commission in the Regular Navy or Marine Corps, or, if they do not choose a career in the Regular Navy or Marine Corps, they will be placed on inactive duty in the Naval Reserve or Marine Corps Reserve. Reserve officers are not called to active duty except during war or a national emergency.

In addition to officer candidates described above, a limited number of fresh-

men may enroll in the NROTC as Contract Students. The Contract Student enters into a mutual contract with the Navy which provides that he take the same Naval Science, mathematics and physics courses required of the Regular NROTC, that he take one summer cruise of approximately three weeks duration between his junior and senior year, and that he accept a commission in the Naval Reserve or Marine Corps Reserve upon graduation. There is no active duty commitment, and Reserve officers are not called to active duty except during war or a national emergency.

The Contract Student receives retainer pay during his junior and senior years amounting to \$0.65 per day, and his uniforms and Naval Science textbooks are furnished by the Navy.

The yearly quota of incoming students in the NROTC unit is limited by Congressional appropriations, and new students are enrolled only at the beginning of the Autumn Quarter. The quota to be enrolled under the scholarship plan outlined above in the Autumn Quarter of 1947 is fifty-two students. The number of Contract Students (non-scholarship) that may be enrolled has not yet been announced by the Navy Department.

Students who are ineligible for enrollment in the NROTC solely because they are in excess of the allowed quota of the unit, may be permitted to pursue Naval Science courses for college credits. They are not eligible to make NROTC practice cruises nor to be paid any compensation or benefits.

The College of Engineering grants twelve credit hours for eighteen hours of work taken during the first and second year. Full credit is given in the College of Engineering for Advanced Naval Science courses taken during the third and fourth years.

PHYSICAL EDUCATION

Courses in Physical Education and School Health Education are conducted by the Department of Physical Education.

Regular class-exercise, two hours each week, is required during the first year of a male student's residence at the University or until he has successfully completed three Quarters of Physical Education. Women students are required to complete six Quarters' work. Hygiene, one hour each week is required of both men and women during one Quarter of the first year. A thorough physical examination is required of all undergraduate students entering the University for the first time. Physical defects, abnormalities, and weaknesses are noted, and exercise is prescribed to fit the student's individual needs.

PERSONNEL SERVICES

The College of Education through its advisory program provides individual counsel for its students. Assisting students to achieve maximum personal and professional development in their educational experience is regarded as a fundamental obligation of the College, an obligation which extends to all students of whatever degree of ability. Advisers are concerned both with helping superior students undertake programs that will challenge their abilities and lead to outstanding accomplishment, and with assisting all students solve the personal, academic, and social problems which confront them.

COLLEGE ADVISORY PROGRAM

General Student Counsellors: The Junior Dean, for freshmen and sophomores, and the Secretary of the College, for juniors and seniors, are the general student counsellors always accessible to students and their parents. They also act as consultants with faculty advisers relative to individual student problems.

Faculty Advisers: Upon entering the College of Education at any level

from freshman to senior, each student is assigned to a faculty adviser. The adviser undertakes to aid the student to arrive at an intelligent evaluation of his progress in terms of what will be expected of him as a teacher or other professional worker. He endeavors to assist the student to determine the significance of his successes and failures, his strengths and weaknesses and, in case of need, to direct him to specialized agencies which may be of assistance to him. During the student-teaching experience, this guidance is extended to personal supervision of the student's work.

Vocational Counselling: The Junior Dean, the Secretary, and the faculty advisers are interested in assisting each student in making an intelligent choice of vocation. Technical assistance by vocational specialists may also be obtained for students if assistance seems needful in individual instances.

Placement Service in the College of Education is described on page 14.

Recreational and Social Adjustment of the Physically Handicapped: Through the cooperation of the University Health Service and the Department of Physical Education, instruction in recreational activities and aid in social adjustment are available to all physically handicapped students. Men may receive information relative to these services by inquiring at Room 124, Men's Physical Education Building, and women at Room 201, Pomerene Hall.

Specialized Advisers: The University provides several technically trained staffs which are available to students who have serious problems which call for the attention of such specialists. A student may make an appointment with any of these services on his own initiative, or his adviser or a personnel officer of the College will be glad to assist in making arrangements for him. Some of these services are described in the sections which follow.

REMEDIAL AIDS CENTER

The Psychology Department and the Bureau of Adult and Special Education offer consultation service to students with problems which are affecting their success in college. The appointments desk, which is located on the third floor of Arps Hall, is open from 8-12 and 1-5 daily except Saturday. The following types of service are provided:

Counselling on Study Habits and Methods: Individual diagnosis and remediation of students' habits and methods of studying are provided through conferences with Mr. John Kinzer. Phone: Campus 537. Students' attention is also called to the course Psychology 411, "The Psychology of Effective Study and Individual Adjustment."

Social and Personal Counselling. A considerable number of students find themselves confronted with emotional, social, or personal difficulties which cause distress and distract attention from college work. Until such problems are solved, they may persist as handicaps to success both in college and in teaching. Individual confidential consultations are available to such students by appointment with Mrs. Emily L. Stogdill or Mr. M. A. Durea. Phone: Campus 441 or 255.

Speech and Hearing Service: Students preparing to teach should possess or develop, ability to speak with clearness and effectiveness, and should be free from any serious hearing handicap. College of Education students interested in improving voice and speech should consult Miss Virginia Sanderson.

Clinics for the testing and follow-up treatment of speech and hearing difficulties are maintained by the Department of Speech, Room 322, Derby Hall.

The psychological clinic also deals with speech cases closely allied to personality problems.

UNIVERSITY HEALTH SERVICE

Baker Hall, Southeast Wing

Medical Staff: Dr. J. W. Wilce, Director; Dr. M. F. Osborn, Dr. Theodore Allenbach, Dr. James A. Beer, Dr. Shirley Armstrong, Dr. Zena Vaile, Dr. Earl H. Ryan, Dr. William Palchanis, Dr. Nicholas Michael, ten specialized occasional consultants, eight nurses, and one technician.

Office Hours: When the University is in session, daily 8:30 to 12:00, and 1:00 to 4:30; Saturday, 8:30 to 12:00. Emergency service, 12:00 to 1:00.

The objects of the University Health Service are:

(1) To protect, maintain, and improve the health of students; cooperation in and follow-up of entrance examination; early diagnosis and control of all communicable conditions, in cooperation with other health agencies; individual health guidance, through personal conference; first aid and casual treatment of students on the campus; periodic health examinations for seniors, food-handlers, and special cases; consultant specialist service for certain cases; full cooperation with family physician, other physicians, and health agencies; centralized correlation of health agencies on the campus to best educational personnel ends; maintained emphasis on individual and group preventive medicine.

(2) To serve as the primary coordinating agency through centralized health records with University Personnel officials in individual student health appraisal and health problems which involve the maintenance, discontinuance, or improvement of students' university relationships.

(3) To furnish a *limited degree* of hospitalization for observation, diagnosis, or treatment of emergency conditions, when in the judgment of University Health Service physicians or private physicians it is thought necessary.

Responsibility for hospital treatment or special hospital expense is not assumed by the University Health Service. The hospitalized student is under the medical or surgical care of the senior members of the hospital staff and may be charged a moderate fee for this service. The hospitalized student has choice of his staff or other physician.

STUDENT FINANCIAL AIDS

The Student Financial Aids Office is located in Room 112, Administration Building. Financial aids counseling is available to all students enrolled in the University. Students having financial problems should make use of the service which coordinates student employment, loans and scholarships.

EMPLOYMENT

Students interested in securing part-time employment should make application during Orientation Week. A large percentage of the student body is earning all or part of its expenses. Usually students work because they need the earnings, some work in order to secure valuable experience which will help in graduate placement or will serve as a trial work experience. Positions should be selected not only for remuneration offered but because of personal values which may be gained. The number of hours a student should work will depend upon many factors: physical stamina, work and study habits, financial need, and the academic load carried. The entering Freshmen attempting to adjust his habits to college life should plan a lighter work and academic schedule than seems necessary. After the first Quarter, provided a satisfactory adjustment has been made, it will be possible to carry a heavier load. The work schedule as well as the academic schedule should always be carefully checked with the Junior Dean.

LOANS

While loan funds are not available to Freshmen, it might be wise at some future date to investigate the possibility of making use of the service. Upper-

classmen—Juniors, Seniors, students in the Graduate School, and those in professional colleges—are eligible for application. In special cases, Sophomores may apply. All applicants must have completed one full Quarter (fifteen credit hours) in residence on the Ohio State campus.

SCHOLARSHIPS

The Ohio State University has a limited number of scholarships which may be awarded to outstanding students in financial need.

For further information concerning employment, loans or scholarships, consult the bulletin, "Financial Aids for Students." Direct application for assistance may be made during Orientation Week at the Student Financial Aids Office, 112 Administration Building.

LIVING ARRANGEMENTS

The President of the University has the authority to supervise living arrangements of students not residents of the city of Columbus and to order the immediate withdrawal of any student from any boarding or lodging house in which the surroundings are undesirable.

ROOMS AND BOARD FOR MEN

Furnished rooms can be obtained at prices varying from \$15.00 to \$30.00 a month (single) and \$25.00 to \$40.00 (double). The cost of the table board in the clubs and restaurants near the University is from \$7.00 to \$10.00 a week. Board can be secured at Pomerene Hall and Ohio Union at reasonable prices.

All Freshmen are required to live in University approved houses.

Board is available on a Quarterly basis for both men and women students in Neil, Canfield, Mack, and Baker Halls. Application may be obtained by writing to the Food Director's Office at Mack Hall.

The Stadium Dormitories provide low cost, barracks type housing for 420 men. Apply directly to the office of the Dean of Men, 108 Administration Building.

MEN'S HOUSING

The University is largely dependent upon the city of Columbus for the housing of men students. With a large increase in the city's population available rooms are very scarce. The Office of the Dean of Men lists each day whatever rooms are available, but can give you no assurance of accommodations. It is advisable to visit Columbus three or four weeks in advance of the opening of the Quarter you expect to enter, to see for yourself what is available.

The University has erected the River Road Project which will house about 1,300 single men students and 350 families. Veterans may obtain applications from the Office of the Dean of Men.

MARRIED STUDENTS

The admission policy of the University is to give first preference to veterans from Ohio. Because of dependence upon the community for the housing of married couples and because there are far too few accommodations for married students from Ohio, *no assistance to out-of-state students* can be offered.

The housing units for families in the River Road Project (see above) are still under construction.

Applications for family units are available in the office of the Dean of Men.

THE GEORGE WELLS KNIGHT INTERNATIONAL HOUSE

The George Wells Knight International House, 104 Fifteenth Avenue, under the supervision of a board of trustees made up of Columbus men offers desir-

able living quarters to foreign and a limited number of American students. Rates for rooms are \$50.00 a Quarter.

MEN'S FRATERNITIES

A large number of men enjoy the advantages of living together in fraternity homes. These Greek letter organizations have for many years maintained establishments which provide excellent rooming and boarding arrangements. They meet the same standards of inspection that are required of the approved houses and are approved as an integral part of the University's housing arrangements. Prospective students who are interested in possible membership should write to the Dean of Men.

WOMEN STUDENTS

Every woman student, whether undergraduate or graduate, must register with the Dean of Women at her office in Pomerene Hall during the first week of each Quarter.

LIVING ARRANGEMENTS FOR WOMEN

All living arrangements for women are under the supervision of the Dean of Women. Women students should apply to the Dean of Women for housing accommodations when making application for admission to the University. Under the rules of the faculty, freshman women so far as possible will be placed by the Dean of Women in the University Residence Halls. Freshmen who are admitted after the University Residence Halls are filled are then placed in University Houses or other smaller units of housing.

Freshmen and other students who desire to work for room and board in private homes may make such arrangements, and those who desire to live with relatives in Columbus will be given permission to do so.

After September 10, 1947, housing cannot be arranged for the Autumn Quarter by correspondence. Students or their parents must consult the Dean of Women or her assistant in person for housing accommodations.

FOR FURTHER DETAILED INFORMATION

Booklets and other sources of information about the various kinds of living quarters will be gladly and promptly sent to any one who inquires. Such information will include detailed descriptions of the halls of residence and houses as well as prices for the various types of accommodation. Address requests for booklets to the Dean of Women, Pomerene Hall, The Ohio State University, Columbus 10, Ohio.

STUDENT AUTOMOBILES

The University does not bar the use of automobiles by students. However, in view of the present tremendous enrollment, students can be given only very limited parking space on the campus, and the use of autos is discouraged. Unless the student drives a long distance to and from his home each day or is physically incapacitated, he does not need a car while attending the University. The cooperation of parents in this matter is earnestly desired.

Every student driving a car on the campus must register the car at the Information Desk in the Administration Building at the beginning of the Autumn Quarter, or such other Quarter as he starts the school year, and again when his license number is changed. Any student who fails to register his car will be given a *double penalty* when cited to the traffic court for violation of the University rule. Registration of the car entitles the student to park *only* in areas set aside for student parking.

RULES AND REGULATIONS

For rules and regulations concerning student responsibility and procedure, see the *University Rules and Regulations for Students*, a copy of which may be obtained from the Registrar.

SCHOLARSHIP STANDARDS OF THE UNIVERSITY

The student is responsible for knowing his own standing with reference to the scholarship standards of the University and of the College.

The Registrar's Office reports the official record to the student at the end of each Quarter, and in some cases the College of Education office supplements these reports by special notices. Further interpretation of the student's record will be furnished by the College office at any time.

The student's scholarship record is expressed in terms of the University marking system and credit-point system. The average quality of achievement for one or more Quarters is indicated by the point-hour ratio. These ratings and the minimum scholarship standards of the University and of the College are explained in the following paragraphs.

THE MARKING SYSTEM AND POINT SYSTEM

The grade marks given in the several Colleges of the University are: A—Excellent; B—Good; C—Average; D—Poor; E—Failed; E abs.—Failed absent.

The mark *Inc.* (*Incomplete*) indicates (1) that the work of the student in the course is qualitatively satisfactory, but that for legitimate reasons a small fraction of the work remains to be completed; or (2) that the record of the student in the course justifies the expectation that he will obtain a passing grade, but he has been absent from the final examination, because of illness, or for some other reason which he has explained to his instructor.

As soon as the incomplete work has been made up, the instructor or department chairman (in case of the instructor's absence from the University) shall file the proper grade in the Registrar's office. Until such time as the final grade is recorded, the credit hours in the incompleting course shall not be counted or considered for any purpose except in cases of athletic eligibility. (Athletic eligibility is governed by Intercollegiate Conference Rules which do not permit participants in intercollegiate contests to have any incomplete marks standing against them.)

At the close of each Quarter every instructor shall file with the head of his department a list of names of students who have received the grade "Inc.," together with a statement of the work required to be completed in the course before a final grade can be reported to the Registrar.

The student is charged with the responsibility of completing the work at the earliest possible moment and of clearing his record of incomplete grades.

At the close of the second Quarter in residence after the mark "Incomplete" was incurred no credit shall be accepted for courses marked "Incomplete." The following exceptions only are allowed: except on courses given only once a year where the work must be completed in the laboratory, in which case the mark "Incomplete" must be removed within one calendar year.

K (Credit) shall be used for work credited from other institutions and by the University Examiner only.

Em (Examination) credit shall be used to indicate that the credit given is for work not done in residence.

A value in "Points" is assigned to each of these grades as follows:

For each hour of A grade, 4 credit points shall be allowed.

For each hour of B grade, 3 credit points shall be allowed.

For each hour of C grade, 2 credit points shall be allowed.

For each hour of D grade, 1 credit point shall be allowed.

For each hour of K credit, no credit points shall be allowed.

For each hour of Em credit, no credit points shall be allowed.

The grade of E receives no credit either in hours or points.

The grade of E (abs.) receives no credit either in hours or points.

The mark E cannot be removed by re-examination. (For removal of failures see page 32.)

REPETITION OF A COURSE

A student who has received a grade of D or E in a course either at this University or elsewhere, may, upon the recommendation of the Executive Committee and with the approval of the Dean of his College, repeat the course for credit. The credit hours for the course shall in no case be counted more than once in meeting graduation requirements.

A student who has received a grade of A, B, or C in a course taken at this University or elsewhere may repeat the course only as an auditor and must receive permission from the Dean of his College.

DEMORILIZED STUDENTS

Upon the approval of the Dean of the College and the Coordinator, a demobilized student who withdrew from the University between September 16, 1940, and August 14, 1945, may elect cancellation of all D and E grades earned during not more than two Quarters immediately preceding withdrawal.

The first Quarter of residence of every demobilized student should be considered an adjustment period, and at the close of the adjustment period with the approval of the Dean of the College and the Coordinator, the student may elect to cancel all D and E grades which he earned during the period.

The adjustment period automatically terminates at the end of the demobilized student's first Quarter of residence. It may be extended for one Quarter by the Dean of the College, with the approval of the Coordinator.

These recommendations do not apply to the Graduate School or professional colleges insofar as they conflict with established professional regulations and criteria.

The term "demobilized student" is interpreted to mean any student (1) who has served in the Armed Forces or the Auxiliary Services of the United States after September 16, 1940, or in the Merchant Marine of the United States or in the Armed Forces or Merchant Marine of its allies; or (2) whose academic education has been otherwise interrupted because of the war for not less than nine consecutive months immediately before his entry into or return to the University.

POINTS REQUIRED FOR GRADUATION

(See page 37)

GRADUATE CREDIT FOR SENIORS

(See page 37)

LOW STANDING

WARNING FOR LOW STANDING AND DISMISSAL FOR DEFICIENCY IN POINTS

Any student who falls below a point-hour ratio of 1.50 on the number of credit hours for which he has been scheduled for any one Quarter shall be warned by the Dean of his college and his parents notified.

Any student who falls below a cumulative point-hour ratio of 1.50 at the end of his third, fourth, or fifth Quarters, or of 1.70 at the end of his sixth or subsequent Quarters on the number of credit hours for which he has been scheduled shall be dismissed from the University.

Dismissal for good and sufficient reasons may be waived by special action

of the Executive Committee of the college in which the student is registered.

A student entering this University from another institution, as far as the applicability of this rule is concerned, will be considered on the same basis as if his entire residence had been at this University, but his point-hour ratio will be computed upon the work done at this University. No such student, however, shall be dismissed under this rule until he has completed two Quarters of residence.

Notices of dismissal from the University shall be sent by the Dean of the college in which the dismissed student is registered, both to the student and to his parents or guardian.

Any student who may be reinstated by the Executive Committee of his college following dismissal shall be subjected to such special requirements as may be deemed expedient by the Executive Committee. If the performance records of any reinstated student do not meet the conditions specified at the time of readmission, then the Executive Committee shall consider all the facts in the student's case and determine whether a dismissal by special action is in order or a waiver for another Quarter is indicated.

These rules shall not apply to students who are registered in the Colleges of Dentistry, Law, and Medicine. The faculties of these colleges are empowered to enact appropriate rules regarding the dismissal of students from these colleges.

DISMISSAL BY SPECIAL ACTION

In cases not covered by the foregoing rules, if at any time the preparation, progress, or success of a student in his assigned work is deemed unsatisfactory, the Executive Committee of the College shall have power to dismiss him from the University.

REMOVAL OF FAILURES

FAILURE IN A REQUIRED COURSE

At his first opportunity a student must repeat in class a required course in which he has failed, unless the Executive Committee of the College authorizes a substitute course. (Rule 320)

ADMISSION TO JUNIOR STANDING

Students in the College of Education pursuing curricula leading to the degree of Bachelor of Science in Education are admitted to junior standing by action of the College Committee on Admission to Junior Standing. In addition to attaining at least 90 Quarter hours of credit with a cumulative point-hour ratio of at least 1.8, on all work undertaken at the University, these students must demonstrate competency in other areas as outlined on page 33.

Students in the College working toward the degree Bachelor of Fine Arts, the degree Bachelor of Music, or the degree Bachelor of Science in Occupational Therapy, attain junior standing when they (1) have accumulated at least 90 Quarter-hours of credit and (2) have attained a cumulative point-hour ratio of at least 1.8 on all work undertaken at the University.

PROCEDURE FOR SOPHOMORES, JUNIORS, AND SENIORS

Certain important steps in planning and procedure must be taken by the student at definite points during the sophomore, junior, and senior years. For the students' convenience these are listed below in order of occurrence under the heading "Procedure." As indicated, some of these procedures concern only the students in teacher-education curricula; the others concern all students in the College. These steps are fully explained in the sections immediately following (pages 33-37).

PROCEDURE

Sophomore Year

1. *Declare choice of curriculum or major teaching fields*—not later than the first Quarter of sophomore year; all students. (See below.)
2. *Meet requirements for admission to junior standing*; teacher-education students only. (See below.)

Junior Year

3. *Plan tentative program for junior and senior years*—at the beginning of junior year; teacher-education students only. (See page 34.)
4. *File application for admission to student teaching*—at the beginning of third Quarter of junior year; teacher-education students only. (See page 35.)
5. *Register candidacy for degree*—at the end of junior year; all students. (See page 35.)

Senior Year

6. *File student-teaching placement cards*—before registering for student teaching; teacher-education students only. (See page 35.)
7. *Register with Appointments Office*; teacher-education students only. (See page 36.)
8. *File application for teacher's certificate*—during first month of final Quarter; teacher-education students only. (See page 36.)
9. *Observe general University requirements relating to graduation*; all students. (See page 36.)

1. CHOICE OF MAJOR TEACHING FIELDS

Not later than the first Quarter of the sophomore year each student in the College should file in the College Office a statement (Form 3699) declaring his choice of fields of specialization. Whenever possible, this statement should be filed *earlier*—as soon as a definite choice has been made. Early declaration enables the College Office and other advisers to extend more satisfactory guidance to students. If the student, later, in conference with his adviser, decides to change his field(s) of specialization, he should declare this change in the College Office.

In all cases of students in teacher-education curricula the choice of major or minor teaching fields shall be officially approved by the Secretary of the College of Education.

2. ADMISSION TO JUNIOR STANDING

Students who have completed two years of college work should know their status with reference to junior standing.

Students pursuing non-teaching curricula attain junior standing as explained on page 32.

Students pursuing teacher-education curricula are considered for admission to junior standing upon the completion of at least 90 Quarter hours of work and the attainment of a cumulative point-hour ratio of at least 1.8. A student having met the two aforementioned criteria based upon accomplishment in course work must be of good moral character and must also demonstrate appropriate competency in the following areas to be admitted to junior standing:

1. Writing skills.
2. Speaking skills.
3. Ability in course work.

4. General informational background with emphasis on current affairs.
5. Thinking ability.
6. Personal adjustment, including ability to deal effectively with younger, older, and same-age people.
7. Possession of recreational and hobby interests and skills useful in dealing with others.
8. Physical health and health knowledge.
9. Professional experiences and attitudes.

The standards for admission to junior standing are administered by a College Committee. Students may inquire in the Office of the Junior Dean about the criteria for admission to junior standing.

Transfer students from other institutions or from other colleges of this University, as well as students entering the College as beginning Freshmen, must satisfy the standards for admission to junior standing. However, in the case of transfer students entering the College with advanced sophomore, or higher standing, a reasonable extension of time in which to satisfy these criteria will be allowed.

To satisfy criterion Number 1, Writing Skills, a grade of "C" or better in English 401 or English 412 is required; the student who receives a "D" and thus fails to qualify must register for English 403 in his fourth or fifth Quarter and pass it with at least a "C," or must otherwise demonstrate equivalent competency under procedure authorized by the Committee on Junior Standing. Transfer students from other institutions who have received "K" credit for English composition on the basis of a "C" grade at the other institution will be required to take a proficiency examination in composition. In case of failure to pass this examination the deficiency must be removed by electing English 403, or by otherwise demonstrating competency as stated above. If English 403 has been elected to remove a deficiency in composition, the credit thus earned will not be counted toward the 190-hour minimum requirement for graduation, but will be additional to that requirement.

Of special importance is the requirement of the College that students in teacher-education curricula must have had approximately 100 clock-hours of field experience in order to meet criterion 9 listed above. (See "Field Experience" page 46.)

A series of tests dealing with health, current affairs, general culture, and thinking ability is given to students in the teacher-education curricula, usually during the last Quarter of their sophomore year.

Students will not be permitted to register for student teaching until they have been admitted to junior standing or have removed any "conditions" stipulated in a "conditional admission."

A student who has completed approximately the two years' work and whose cumulative point-hour ratio is below 1.8 will not be admitted to junior standing or to any "600" courses until after the end of the Quarter in which a 1.8 cumulative point-hour ratio has been attained. In such case the student may be permitted to continue his registration in the College of Education, subject to the usual rules of dismissal, until he has attained the necessary 1.8 cumulative point-hour ratio. However, delay in attaining junior standing because of low point-hour ratio will increase the student's requirements for graduation to more than the regular minimum of 190 Quarter hours, since at least 90 Quarter hours, or approximately six Quarters' work, must be completed after junior standing has been attained. See also page 32.

3. PROGRAM FOR JUNIOR AND SENIOR YEARS

Every student is strongly advised to prepare, at the beginning of his junior year, a tentative program indicating Quarter by Quarter the courses he will probably wish to elect to complete his curriculum. Such systematic,

long-time planning, rather than planning for one Quarter at a time, will help to eliminate unforeseen difficulties in time scheduling, will aid in securing satisfactory sequences in the required courses, in making wise choice of electives, and in electing well-balanced quarterly programs.

When planning a long-time program, the student should study his curriculum requirements and the programs of his teaching fields, examine the elective courses offered and consult his adviser before definitely arranging his program. A suggested list of free electives is found on page 46.

Care should be used in the selection of minor teaching fields. Advisers should be consulted as to appropriate combinations with major fields.

Forms for the junior-senior program may be obtained in the College Office (Arps Hall, Room 102). When approved in the College Office, three copies of the student's program should be made—one to be retained by the student, one to be given to his adviser, the other to be filed in the College Office for future guidance.

These long-time programs, of course, are not to be regarded as fixing the remainder of the student's schedules. They may be revised whenever a change of the student's interest or other circumstances make revision advisable.

4. PRELIMINARY APPLICATION FOR STUDENT TEACHING

Not later than the last Quarter of his junior year every student who expects to register for student teaching (Education 518, 520, or 536) in his senior year must file with the Director of Field Service, Room 103, Arps Hall, a preliminary application for admission to student teaching. In the case of students in the music curricula, the application should be filed during the Quarter preceding the Quarter in which the student takes Education 520. These applications enable the Director of Field Service to determine the applicants' eligibility for student teaching in a subsequent Quarter, and also serve as a basis for estimating student-teaching enrollments. Application for student teaching will not be approved until the student has been admitted to junior standing by the College committee and has removed any conditions stipulated in his letter of admission to junior standing. Application blanks are to be obtained in the office of the Director of Field Service.

5. REGISTRATION AS CANDIDATE FOR DEGREE

Every student is required to register candidacy for his degree in the College of Education not later than the fourth Quarter prior to his graduation. Registration for a degree consists of filling out and filing in the College of Education Office a blank form (No. 2344) which will be furnished. If necessary, the student will be given a statement indicating his remaining requirements for graduation, except that such statements should *not* be requested during the week preceding or the week following the issuance of schedule cards on November first or February first respectively.

Students who expect to receive their degrees at the end of the Spring Quarter 1947 should register candidacy for the degree by June 1, 1946. Students who expect to receive their degrees at the end of the Summer, Autumn, or Winter Quarters should register their candidacy four Quarters prior to the expected time of graduation.

6. STUDENT-TEACHING PLACEMENT CARDS

Student-teaching placement cards must be filed with the Director of Field Service, Room 103, Arps Hall, not later than the time of filing, in the Registrar's office, the schedule for the Quarter in which student teaching is to be elected. The College Secretary's office will refuse to approve any schedule which includes a course in student teaching (Education 518, 520, 536) until such placement cards have been filed with the Director of Field Service. Further details regarding registration for student teaching will be found

in the course descriptions of Education 518, 520, and 536. Blanks are to be obtained at the office of the Director of Field Service.

7. REGISTRATION WITH APPOINTMENTS OFFICE

All seniors who are prospective candidates for the degree of Bachelor of Science in Education must have completed registration with the Appointments Office, Room 111, Arps Hall, not later than the fourth week of the first Quarter of the Senior year. Forms for the registration are to be obtained from the Appointments Office. This is a requirement for graduation, and the schedule of the next to the last Quarter of the Senior year will not be approved by the Secretary of the College of Education until the student has completed registration with the Appointments Office.

8. APPLICATION FOR TEACHER'S CERTIFICATE

All applications for teacher's certificates must be filed in the College of Education Office. Spring Quarter graduating seniors who desire to receive their certificates at the time of graduation should file applications not later than the end of the Winter Quarter; Summer, Autumn, and Winter Quarter graduates, not later than the fourth week of the Quarter of graduation.

Graduates who have completed the General Curriculum with academic major teaching fields are entitled to the four-year provisional high school certificate.

Graduates with major fields in home economics, commercial education, fine arts, industrial arts, music, physical education or dental hygiene are entitled to the four-year provisional special certificate. The holder of this certificate is eligible for appointment as teacher or supervisor in the particular field covered by the certificate in grades I through XII.

The graduate whose major field is home economics, business education, fine arts, industrial arts, music, or physical education, and who has also completed *one or more minors* in academic or in other "special" fields is entitled to, and is advised to make application for, a four-year provisional high school certificate in addition to the four-year provisional special certificate.

Graduates who have completed the curriculum in elementary education are entitled to the four-year provisional elementary certificate.

9. GRADUATION

ANNOUNCEMENT OF CANDIDATES FOR THE DEGREE

For the information of candidates for graduation each Quarter, the College office will post a tentative list of candidates for all degrees on the official bulletin boards at the main entrance to Arps Hall and at the entrance to the College of Education office, Room 102, Arps Hall. These lists will be announced at approximately the middle of each Quarter.

RESIDENCE REQUIREMENT FOR A DEGREE

A candidate for a degree must secure credit by regular class enrollment for the full work of three Quarters. This work must be in courses offered by the College recommending the degree, and must be secured while in residence at this University.

Ordinarily the student must be enrolled in the college recommending the degree while completing the last two Quarters required of him, but the Executive Committee of that college may, for sufficient reason, waive compliance with this requirement to the extent of not more than one Quarter's work in favor of a student who has done six full Quarters of satisfactory residence work at this University, including forty-five Quarter-credit hours completed during the junior and senior years.

POINTS REQUIRED FOR GRADUATION

The number of credit points required for graduation shall amount to not less than 1.8 times the number of credit hours undertaken at this institution. (For Point System see page 30.)

GRADUATION FEE

No graduation fee is charged for persons receiving a bachelor's degree.

INSTRUCTIONS FOR GRADUATES

Printed detailed instructions for graduating seniors may be obtained at the College office approximately ten days before Convocation, unless previously mailed from the University office.

COMMENCEMENT—CONVOCATION

A special Convocation or Commencement shall be scheduled at the close of each Quarter for the conferring of degrees upon candidates who have fulfilled all the requirements of their respective courses.

ATTENDANCE AT CONVOCATION EXERCISES

All candidates for degrees are required to be present at their graduation convocation unless excused by the President.

GRADUATE WORK

Students desiring to do graduate work in the College of Education will register in the Graduate School. Graduate courses leading to the degrees of M.A. and Ph.D. are offered in the following professional departments of the College of Education, (1) Education, in which the student may specialize in philosophy of education, history of education and comparative education, elementary, secondary, or higher education, industrial arts education, business education, teaching of the various high school subjects or fields, such as English or social studies, guidance, special and adult education, superintendency, and other areas; (2) Psychology; (3) Fine Arts; and (4) Physical Education. Graduate work leading to the Masters of Arts degree is offered also by the School of Music. For information regarding fees, registration, graduate degree, etc., consult the Bulletin of the Graduate School.

All graduate students registered in courses numbered from 600 to 799 are required to complete a certain amount of work in addition to that required of undergraduates. This may consist of reading additional books on the subject, the presentation of reports, or of such other work as the instructor in charge of this course may deem wise.

GRADUATE CREDIT FOR SENIORS

A senior whose full time is not required for the completion of the work for his baccalaureate degree may select certain courses for graduate credit, *but to do this permission must be obtained at the office of the Graduate School (Room 309, Administration Building) and the student should consult with the Secretary of the College before registering for the courses.* A grade of "B" or better must be received in order to obtain graduate credit for such work. Not more than fifteen Quarter hours of such work may be counted toward an advanced degree.

ACADEMIC RECOGNITION

DEGREE WITH DISTINCTION

The College of Education grants the Bachelor's Degree with Distinction to a limited number of students selected by a committee of the College faculty. A student may become a candidate for distinction either (a) through nomination by faculty adviser(s) or (b) upon approval of application submitted by the student himself. The Committee will recommend for the degree with Distinction on the basis of satisfactorily meeting the requirements set up by the faculty.

Further information may be obtained by conferring with Mr. Bennett, Room 101, Arps Hall.

PROFESSIONAL FRATERNITIES AND SORORITIES

Chapters of several professional fraternities and sororities for men and women majoring in the fields of education have been organized at this University. The purposes of these organizations and their criteria for membership are described in the following paragraphs:

Phi Delta Kappa, national professional educational fraternity, was founded in 1908. Members are selected from men of high scholastic and professional standards who are majoring in the field of education, membership being confined mostly to graduate students, but including a limited number of seniors selected because of their high qualifications. Sigma Chapter at The Ohio State University was established December 1, 1917.

Alpha Psi Delta, national psychological fraternity, is represented at The Ohio State University by Beta Chapter, established at The Ohio State University in 1921. Its members are the men who are faculty members of the Department of Psychology, and graduates who are specializing in psychology. The meetings are largely devoted to lectures on and round table discussions of psychological topics, and to the reviews of books and periodicals in the field.

Sigma Theta Tau, national scholarship society of nursing, is open to students of senior standing. Selection of members is based upon intellectual attainment and professional advancement. This society was founded in 1922. Epsilon Chapter at The Ohio State University was established in 1932.

Torch, local honorary nursing society, is open to women of junior and senior standing. Selection of members is based upon professional accomplishment and social adaptability.

Kappa Phi Kappa, national professional educational fraternity for undergraduates and graduate students in Education, established Alpha Eta Chapter at The Ohio State University in 1928. The purpose of this fraternity is to emphasize professional ideals, scholarly attainment, and social intercourse. The organization has maintained a fraternity house but of necessity this has been temporarily discontinued. Members are selected from men who have given promise of genuine interest in the professional study of Education. The fraternity, which was inactive during the war, was reactivated in May, 1946.

Pi Lambda Theta, national honorary educational sorority, is open to women students of junior, senior, and graduate standing. Selection of members is based upon scholastic attainment, professional and social accomplishment. The sorority was founded in 1917; Nu Chapter at The Ohio State University was established in 1921.

Epsilon Pi Tau, international honorary professional fraternity in Industrial Arts and Industrial-Vocational Education for upperclassmen and graduate stu-

dents, was established at The Ohio State University in 1929. There are now twenty-two chapters with eighteen hundred members residing in forty-five states and in several foreign countries. Its ideals are to advance beyond an assumed basis of *artisan skill* into *social proficiency* and active *research effort*. Basis for membership lies in the individual's potentialities for growth in the ideals of the fraternity.

Delta Omicron, national professional music sorority, is open to women music majors. Membership is based upon interest and ability in some phase of music, and scholastic standing. The purpose of this sorority is to create and foster fellowship among musicians during their student days, with the idea of attaining the highest degree of musicianship individually. The sorority was founded September 6, 1909; Chi Chapter at The Ohio State University was established on December 13, 1928.

Pi Mu Alpha Sinfonia, national music fraternity, founded in 1898, is represented by Beta Xi Chapter, one of seventy-two active chapters. Its purpose is to advance in America the composition and performance of the best in music, to foster the mutual welfare and brotherhood of students of music, to foster certain ideals in both individual development and group accomplishment, and to encourage loyalty to the Alma Mater. Selection of members is on the basis of scholarship, musicianship, and social qualities.

Pi Omega Pi, national business education honorary fraternity, was founded in 1923 and Alpha Xi Chapter at The Ohio State University was established in 1939. Selection of membership is from students, both men and women, of junior, senior, and graduate standing. Its purpose is to encourage, promote, extend and create interest and scholarship in business education.

Kappa Kappa Psi, national band fraternity, is represented by Eta Chapter. Men students who have participated in the band for one full year are eligible for membership, and members are chosen on the basis of merit in musicianship, attitude and conduct. The purpose of the organization is to promote the interests of the band, to foster good music and to reflect glory on the Alma Mater.

Student Occupational Therapy Association, local occupational therapy organization was established at The Ohio State University in 1942. Any student actively pursuing the curriculum in Occupational Therapy is eligible for membership. The purpose of the organization is to foster a spirit of professional unity among its members, to promote interest in and to further knowledge of occupational therapy.

EDUCATION STUDENT COUNCIL

The College of Education Student Council is composed of representatives of the student body selected by the students on the basis of leadership and successful scholarship. The Council endeavors to serve as a coordinating body among the students, faculty, and administration of the College. Each year several projects, planned to foster a better understanding of the aims and purposes of the College, are carried out.

MEDALS AND PRIZES

THE RHODES SCHOLARSHIPS

Men who have completed their sophomore year at The Ohio State University are eligible to compete for the Cecil Rhodes Scholarships, tenable for three years at Oxford University, England, with a stipend of four hundred pounds each year. These scholarships are awarded on the combined basis of character, scholarship, athletics, and leadership in extra-curricular activities. Further information may be obtained from Edgar H. McNeal, Department of History, University Hall; or from the Dean of the College of Arts and Sciences.

THE WILLIAM EDWARD BINGHAM MEMORIAL MEDAL IN PHILOSOPHY

A medal is awarded annually to the undergraduate who presents the best essay on a philosophical topic. The conditions of the competition are fixed by the Department of Philosophy. The medal, established in 1922, is a memorial to William Edward Bingham, a graduate student in philosophy in this institution from 1914 to 1916; he served in the United States Navy from April, 1917, to December, 1918, when he was accidentally drowned in the performance of his duties in the harbor of Tangier. The medal was executed by Mme. Anie Mouroux.

THE BRYAN PRIZE

Through the generosity of the late Hon. William J. Bryan an annual prize of \$75.00 is offered for the best essay on a subject involving the principles underlying the American government. Competition for this prize is open to all graduate students who are alumni of this University, and to all members of the graduating class. For further information make inquiry of the Chairman of the Department of History.

THE VANDEWATER POETRY PRIZE

The Vandewater Poetry Prize was established Semicentennial Week by Mrs. Sarah O'Kane Raymund, '91, in honor of her grandfather. All students, graduate or undergraduate, *in residence* in the University are eligible to compete. No limit is set to the number of contributions that may be offered by one contestant. Announcement of the results is made in May; the award of \$25 is made to the successful contestant at the June Commencement and the winning poem is published in the Ohio State University Monthly and in the Ohio State Lantern. The judges are members of the staff of the Department of English or others chosen by them. If in any year none of the work submitted is of sufficient merit, the donor provides that the income be spent by the Department of English for books of poetry or criticism to be deposited in the University Library.

THE JOHN GORDON BATTELLE MILITARY PRIZE

The income of the John Gordon Battelle Fund, established in 1916, is to be used as a yearly prize for senior cadet officers in the ROTC Regiment for the best solution of a military map problem. Members of the Medical Corps are not eligible. The income is now sufficient to offer a substantial prize for the three best solutions.

THE SWORD OF '86

The Class of 1886 presented the Military Department with a prize sword to be presented to the outstanding First Year Advanced Course student in the ROTC Regiment, except Medical Corps students. He has the privilege of wearing it for one year. At the close of the year, he is presented with a prize, and the Sword of 1886 is returned to the Military Department.

PHI LAMBDA UPSILON AWARD

Eta Chapter of Phi Lambda Upsilon presents annually an award to the Senior majoring in chemistry, and related fields such as chemical engineering, physiological chemistry, agricultural chemistry, etc., who has in his four years of undergraduate work compiled an outstanding record in chemistry, and who has, in the opinions of the faculty in chemistry and active members of Phi Lambda Upsilon, shown outstanding ability in his field, and has demonstrated by his record, personality, and activities greatest promise for future success in his chosen field. The award consists of the addition of the recipient's name to the Phi Lambda Upsilon Plaque, which hangs in the Main Hall of the Chemistry Building, and of not more than fifteen dollars worth of books chosen by the recipient.

THE TEACHER-EDUCATION CURRICULA

The several curricula of the College of Education provide for the varied demands of the public school service. These demands cover the instructional needs of children and youth of pre-school, kindergarten, elementary, and secondary school ages.

The curricula aim to provide prospective teachers with an understanding of the nature and needs of the young and to develop an acquaintance with the most favorable conditions for their growth. They aim to impart to prospective teachers the meaning of education in its relation to desirable social objectives; and, by means of certain technical courses in education, to illustrate interpretative instruction. Curricular provision is made for subject-matter mastery in the fields of specialization.

Provision is also made for a study of education in historical perspective and of organization and administration of schools in relation to the needs of the learner and to social aims. Some provision is made for free electives in recognition of the principle of individual differences and of defects of previous training. The student is advised to review carefully his interests and deficiencies in exercising the elective privilege. The curricula designed primarily as preparation for teaching at the same time enable the student to include as essential elements in his program a substantial proportion of the subjects traditionally classified as liberal or cultural. For example, the curriculum for the preparation of high-school teachers will ordinarily include from 100 to 125 Quarter credit hours, distributed appropriately among the fields of English, foreign languages, mathematics, science, history and other social studies.

The College of Education assumes that it is both possible and desirable to find, develop, and use educational experiences appropriate for developing a wide range of personal and social characteristics and abilities of students. Accordingly, the College has formulated statements of factors of competency (a) which are deemed desirable for beginning a program of preparation for teaching, or, (b) which may be developed during the period of preparation. The student should read discussions of Factors of Competency which appear in *Adventures in Reconstruction of Education* (pages 24ff.), *Student Planning in College* (especially Chapter III), *Ohio Teaching Record*, or in mimeographed statements obtainable at the College Office. While, in the pages which follow, the College program is presented largely in terms of courses, it is anticipated that the student will come to think of the pursuit of a curriculum as a process of development in terms of the factors of competency for teaching.

TYPES OF CURRICULA

The College of Education offers four-year curricula for the preparation of teachers. These curricula all lead to the degree of Bachelor of Science in Education. For convenience, they may be grouped under three types, as follows: I. General Curriculum; II. Special Curricula; III. Elementary Curriculum.

1. **The General Curriculum.** For preparing junior and senior high school teachers of the academic subjects: English; the foreign languages, Latin, French, German, and Spanish; speech, mathematics; the natural sciences, biology, physics, chemistry, and general science; history and other social studies.

This curriculum is outlined on page 48, and the recommended program for preparation within these teaching fields are presented on pages 48 to 61.

II. The Special Curricula. For preparing teachers and supervisors of the so-called "special" subjects: business, fine arts, health education, home economics, industrial arts, music, physical education; teachers in part-time and continuation schools and classes; teachers in schools of nursing, school nurses, public health nurses, and dental hygienists. These curricula are outlined on pages 61 to 101.

III. The Elementary Curriculum. For preparing teachers, supervisors, and principals of elementary schools. This curriculum is outlined on page 94.

The College of Education presents four-year curricula for the preparation of professional artists, leading to the degree of Bachelor of Fine Arts. These curricula are supervised by the School of Fine and Applied Arts, a division of the College of Education. These curricula are outlined on pages 95 to 99. The Summary of Course Requirements in the Teacher-Education Curricula, pages 41 to 48, does not apply to these curricula.

The College of Education presents a four-year curriculum for the preparation of professional musicians leading to the degree, Bachelor of Music.

Three curricula are offered in the following special fields of music:

- a. Applied Music with a major in Piano, Organ, Voice, Orchestral Instrument, Violin, Viola, Violoncello, Contrabass, Flute, Clarinet, Saxophone, Bassoon, French Horn, Cornet, Trumpet, Trombone, Baritone, and Tuba.
- b. Church Music
- c. Radio Music

Full details of the course requirements, entrance requirements and graduation requirements, may be found in the School of Music bulletin, which may be had upon request. Address, School of Music, Room 1, Page Hall.

The College of Education offers a curriculum for the preparation of Occupational Therapists, leading to the degree of Bachelor of Science in Occupational Therapy.

SUMMARY OF COURSE REQUIREMENTS IN THE TEACHER-EDUCATION CURRICULA

The courses included in the curricula for the preparation of teachers are in five groups, as follows: I. Non-professional Courses; II. Teaching fields; III. Professional Courses; IV. General University Requirements; V. Electives.

These requirements for all curricula will now be summarized in order, the summary to be followed by outlines of the curricula and by recommended programs in the major and minor teaching fields.

I. REQUIRED NON-PROFESSIONAL COURSES

- (1) English 401, Composition and Reading, five hours.

Required in all curricula, with the exception of the industrial arts curriculum, except that students who make application for and successfully pass a proficiency test will be excused from the requirement and receive credit for the course.

English 410, 411, 412, Composition, nine hours. Required in Industrial-Arts and Dental Hygiene-Education curricula.

A minimum grade of "C" in English 401 or 412 is required (see "Admission to Junior Standing," page 32). The student who receives "D" must register for English 403 in his fourth or fifth Quarter and pass

it with at least a "C," or must otherwise demonstrate equivalent competency under procedure authorized by the Committee on Junior Standing. Transfer students from other institutions who have received "K" credit for English Composition on the basis of a "C" grade at the other institution will be required to take a proficiency examination in composition. In case of failure to pass this examination the deficiency must be removed by electing English 403 or by otherwise demonstrating competency as stated above. The five hours credit in English 403 earned to remove a deficiency will be added to the 190-hour minimum requirement for graduation.

- (2) English 430, Introduction to Literature, five hours. Required in the fine arts, home economics, music, physical education, and elementary education curricula.
- (3) Social Studies, ten hours, unless otherwise indicated in the curriculum outline, to be satisfied by one of the following: (a) Sociology 401 and either 402 or 407; (b) Economics 401 and 402; (c) Political Science, 10 hours from 401, 402, 410; (d) Sociology 410 and Economics 406.
- (4) Natural Science, ten hours.
 - (a) In the general, business, fine arts, and music curricula, two five-hour courses in one of the following sciences: botany, zoology, physiology, astronomy, physics, chemistry, geology, general studies (as indicated).
 - (b) In the home economics, industrial arts, physical education, dental hygiene, and elementary teachers' curricula, ten or more Quarter hours in specified sciences as indicated in the curriculum outline.
- (5) Psychology 401, General Psychology, five hours. All curricula.

Courses taken in fulfillment of the non-professional requirement may be credited toward the fulfillment of the requirement (a) in the corresponding major teaching field, or (b) in the corresponding minor teaching fields. See below.

II. THE TEACHING FIELDS

Choice of Teaching Fields

Teaching fields should be chosen by the student on the basis of his individual abilities and interests, and also in the light of available information concerning the demand for beginning teachers and the supply in the respective fields.

Bulletins containing information helpful to students in selecting their teaching fields may be obtained upon request at the College office.

Not later than the first Quarter of the sophomore year, the student should file in the College Office, for the purpose of record, a statement declaring his choice of teaching fields. For details, see page 32.

Requirements of Different Curricula

General Curriculum. In this curriculum for teachers in junior and senior high schools, the student must qualify either in (a) two major academic high school teaching fields or (b) in one major high school academic teaching field and two minor teaching fields or (c) in one "double-major" and one minor teaching field, as in the Social Studies (page 54). The outline of the General Curriculum is found on page 48; immediately following are the outlines of recommended programs and requirements in the different academic teaching fields covered by the General Curriculum (pages 48 to 61).

Special Curricula. In the curricula for teachers and supervisors of business Education, fine arts, health education, home economics, industrial arts, music, physical education, specialization in only one teaching field is required. However, it is strongly recommended that the student shall achieve preparation in at least one additional teaching field approaching as nearly as possible to the standard specified for the teaching fields of the General Curriculum (pages 49 to 61) or in the Special Curriculum for the subject chosen. When selecting a second field of preparation, the student should consult his adviser. The Special Curricula are shown on pages 61 to 101 of this Bulletin.

Elementary Curriculum. In the curriculum for teachers in elementary schools, all required courses are indicated in the curriculum outline (page 90) except that the student must elect twenty hours of advanced courses in some one selected field in addition to courses that are specifically required.

Standard of Achievement Required in the Teaching Field

Admission to Junior Standing. For all students pursuing the General Curriculum or a special curriculum, an average point-hour ratio of 2.25 in the major and minor teaching fields on all courses taken at this University will be required for admission to supervised student teaching (Education 520, 536). Students transferring to the College of Education shall fulfill the 2.25 point-hour average on *all* courses in the teaching fields taken at this University regardless of the Quarter in which such courses were elected. In the General Curriculum the point-hour average of 2.25 must be attained in each of the major and minor teaching fields as a prerequisite for admission to supervised student teaching in either field.

For all students pursuing the elementary curriculum an average point-hour ratio of 2.25 on all required professional courses taken at this University will be required for admission to supervised student teaching (Education 518). Professional courses include Education Survey 407, 501, Psychology 407, 663, 664, all education courses, Fine Arts 569, 570, Music 446, 447, 448, Sociology 407, Physical Education 476.

Students transferring from other institutions and requesting credit for Education 536, 520 or 518 will be required to fulfill the 2.25 point-hour ratio before such credit shall be granted. Application of the rule to transferred students for this purpose shall terminate at the close of the Quarter preceding the Quarter of graduation.

Graduation. To be approved for the degree Bachelor of Science in Education, students completing any of the teacher-education curricula must have attained a point-hour ratio of 2.25 on the *completed* teaching fields as follows: In the General Curriculum a point-hour ratio of 2.25 in each of the completed, required, majors or minors; in the Special Curricula a point-hour ratio of 2.25 on the entire group of courses constituting the required major; in the Elementary Curriculum a point-hour ratio of 2.25 on the completed group of required professional courses.

Minor Teaching Fields

Both the general and special curricula recognize the principle that adequate training cannot be provided in more than two teaching fields within the limit of the four-year curricula. However, extended follow-up study of alumni has shown that, in Ohio, approximately two-thirds of beginning high school teachers of academic subjects, in their first year of teaching, are assigned to teach in at least three different fields. Beginning teachers of special subjects are frequently expected to teach in at least one additional field. In view of this situation the College will recognize as a minor teaching field and will certify to the State Department of Education as meeting the minimum requirement for certification, any subject or subjects additional to the required

majors or minors in which the student has met the minimum requirement as defined by the State Department of Education. The Secretary of the College, however, is authorized to refuse to certify such credit for purpose of certification if the work is not of *satisfactory quality*.

The teacher's certificate will not designate the fields of specialization as majors or minors, but will indicate the number of hours of college credit completed in each subject.

For convenience, minor teaching fields are presented in this bulletin under two groups: academic subjects and special subjects. The recommended minor programs in academic subjects are given following the recommended major programs in the corresponding subjects in this bulletin, pages 49 to 61. The recommended minors in the special subjects appear following the curriculum outlines in the corresponding subjects, pages 61 to 101.

Academic Subjects. At least *twenty-three Quarter hours* of collegiate credit, in addition to the prerequisite high school credit for each minor teaching field is required. Persons who lack the full high school credit prerequisites may offer, in lieu of each unit of high school deficiency in that subject, five Quarter hours of college credit in addition to the twenty-three Quarter hours.

Special Subjects. The minimum collegiate credit required for certification (minor) in the special subjects varies. In most fields the credits presented must be approved by the appropriate University department, as satisfying the certification standards of the State Department of Education. In each field a *teaching methods* course is required and is included within the total. No high school prerequisite is required.

The minimum number of collegiate Quarter hours required by the State Department of Education for minors in the special fields and the courses recommended by the College of Education as satisfying the State Department requirements are indicated following the corresponding curriculum outline (pages 61 to 101). Any variation from the recommended program must be approved by the appropriate departmental adviser and the Secretary of the College.

North Central Association Standards. The current standards for minor teaching fields as defined in this bulletin meet the minimum standards of "preparation of the instructional and supervisory staff" set by the North Central Association of Colleges and Secondary Schools, as adopted March 30, 1939, and published in the Association's 1945-1946 bulletin, "Policies, Regulations, and Criteria for the Approval of Secondary Schools," pages 12-14.

III. REQUIRED PROFESSIONAL COURSES

The required professional courses vary with the different curricula. They are specifically indicated in the curriculum outlines on pages 48 to 94. For convenience they are summarized in the following statement.

Courses Required in General and Special Curricula

| COURSES | CURRICULA IN WHICH REQUIRED |
|---|--|
| Education Survey 407 or 501 | All curricula |
| Psychology 407 (Educational Psychology) | All curricula |
| Education 533 (The Theory and Practices in Secondary School Teaching) | All general and special curricula except music |
| Education 534 (The Theory and Practices in Secondary School Teaching—Continued) | General, business education, home economics, industrial arts curricula |
| Methods course in each teaching field | All curricula, as indicated, pages 48 to 101. |

(Continued on next page)

COURSES

Education 536 or 537 (Student Teaching in Secondary Schools)
 Education 607 (Philosophy of Education)
 Education 632 (The History of Modern Education)
 Professional Electives

CURRICULA IN WHICH REQUIRED

All curricula, in one teaching field
 All curricula
 All curricula
 As indicated in curriculum outlines.

Courses Required in Elementary Curriculum

Professional courses required in the Curriculum in Elementary Education are listed in the curriculum outline, page 94.

Professional Electives

Professional electives include courses in Education (except 401, 402, 403, 404, 405, 406, 455, 458, 471, 472, and 473); Psychology 408, 411, 510, 581, 608, 609, 611, 613, 615, 616, 617, 618, 619, 622, 628, 631, 640, 641, 642, 661, 663, 664, 665, 668, 669, 670, 671, 674, 676, 680, 681, 683, 685, 688, 690, 703; Sociology 407 (unless counted toward the social science requirement), 678, 680; Physical Education 610; Speech 504. Helpful suggestions for choosing professional electives will be found in Section IV, A 1, 2. It should be observed that only such courses as are listed above will be considered as professional electives.

Field Experience

Students in all curricula are urged to participate as extensively as possible in school or community service as a part of the preparation for teaching. Approximately 100 clock-hours of this type of experience are required by the College for admission to junior standing of students in teacher-education curricula. Particular emphasis is placed, at the beginning of the sophomore year, on participation in public schools in September prior to the opening of the University. The course, Education 505, Field Laboratory Service in Education, permits students under certain conditions to receive credit from field experience. Further information may be obtained at Room 103, Arps Hall.

IV. ELECTIVES IN THE CURRICULUM OUTLINE

When the word "elective" appears in a given Quarter of the curriculum outline, it means that out of the fifteen or more hours for which the student will normally register in any Quarter, a certain number may be used in some way not definitely prescribed in advance.

It is the responsibility of the student with the help of his advisers to decide upon the program of electives that best meets his needs. The student should consider his purposes and interests, his strengths and weaknesses, and the type of position he is most likely to fill. The following list of electives is suggestive in terms of the student's purposes.

A. The student is free to choose electives designed to assist him in becoming more competent as a contributing member of a school community.

1. Courses and minor problems designed to provide for increased facility in dealing with problems of child growth and development, such as: *Providing for Individual Differences*, Psychology 510, 663, 664, 670, 676, 650; *Home Economics* 561, 661, 621; *Education* 765, 766, 767, 600. *Diagnosis and Treatment*, Psychology 408, 411, 615, 616, 617, 618, 619, 661, 671, 650. *Special Aspects of Human Development*, Psychology 683, 628, 665, 650. *Gifted and Handicapped Children*, Psychology 609, 611, 622, 641, 669, 650;

2. Courses and minor problems designed to provide increased facility in dealing with general functions of the school in which all or nearly all teachers are called upon to participate, such as: *The School Library*, Education 503, 550. *Visual and Radio Education*, Education 600q, 600r, 601, 602. *Journalism*, Education 600r, 674; Journalism 508. *Speech and Dramatics*, Education 675; Speech 504, 521. *Guidance and Counseling*, Education 750, 751, 752, 755; *Assistance in Counseling*, Psychology 581, 631, 640, 671, 674, 681, 685, 688, 689, 690; Physical Education 560. *School-Community Relationships, General Citizenship, and Rural Life*, Sociology 600, 607, 645, 656; Social Administration 646, 647; Rural Economics and Rural Sociology 505, 506, 606; Education 624. *Problems of the Teaching Staff*, Education 699, 701, 702; *Philosophy of Education*, Education 610, 611, 617, 620; Philosophy 516, 656. *Measurement and Evaluation*, Psychology 608, 613, 680. *Unified Studies*, Education 600b, 600f, 676. *Health*, Education 664; Physical Education 643, 644, 610. *Consumer Problems*, Economics 645; Business Organization 715. *Labor Problems*, Economics 402.
- B. The student is free to elect courses designed to meet some *group requirement*, as for example, courses within the teaching fields which the student has chosen.
- C. The student is free to elect courses designed to develop increased *sensitivity to cultural values* as they relate to our changing world. Particular attention is drawn to courses which relate the natural and social sciences to everyday life, such as: courses in the General Studies group; Geography 651; Education 682. The relation of fine and practical arts to cultural change suggests such courses as: courses in English and American Literature; Fine Arts 430, 508, 689; Education 455; Music 405-506-507, 429, 550, A, B, C, D, E, F, G, H, I, J.
- D. In addition to the courses suggested in the preceding paragraphs, many courses are available in a wide range of departments which will give the student an insight into new and interesting fields of study. Students are encouraged to include in their programs a number of such electives. These courses may or may not be related to the students' fields of specialization. The following list, which necessarily duplicates in a few instances suggestions in the preceding paragraphs, consists mostly of courses which have no prerequisites and which, therefore, are open to students who have had no previous work in the department. It is assumed that students who have taken introductory courses will have no difficulty in selecting advanced courses.
 1. Introductory courses in any department, usually numbered 400, 401, or 402.
 2. Courses which have no specific prerequisites:
 - Astronomy 500
 - Business Organization 651
 - Classical Languages: Latin 507, 608
 - Engineering Drawing 538
 - English 430
 - Fine Arts 421, 431, 461, 484, 501-502-503, 508, 539
 - General Studies 431, 432, 451, 510, 520
 - Geology 420
 - History 403, 404, 411, 501, 505, 510
 - Home Economics 508 (women students only)
 - Home Economics 510, 518 (men or women students)
 - Journalism 508, 517, 519, 525, 617, 622

Landscape Architecture 500
 Mathematics 401, 404, 421, 422, 490, 491
 Music 405-506-507, 429, 550, A, B, C, D, E, F, G, H, I, J
 Philosophy 405, 406, 516
 Photography 511, 515
 Physics 411, 445
 Political Science 600
 Sociology 501
 Speech 410, 521, 541, 542, 660, 692
 Survey 605, 608

3. Advanced courses in any field, available to students who have taken the prerequisite elementary courses.

V. GENERAL UNIVERSITY REQUIREMENTS

Physical Education: Women—First and Second Years—6 Quarters; Men—First Year—3 Quarters.

Physical Education 400: All students—First Year.

Military Science: Men—First and Second Years—6 Quarters.

Certain exceptions to the foregoing requirements apply in the cases of students over twenty-five years of age, and of students entering the University with advanced standing. For details, see the Student Rule Book.

GENERAL CURRICULUM

FOR HIGH SCHOOL TEACHERS OF ACADEMIC SUBJECTS

Students in this curriculum are *required* to complete either (a) *two major* academic high school teaching fields or (b) *one major* high school academic teaching field and *two minor* teaching fields or (c) *one "double-major"* and *one minor* teaching field, as in the Social Studies (page 55). Recommended programs in the various "academic" major teaching fields are outlined on pages 49 to 61. The provisional high school certificate will include a statement of the number of credit hours completed in each major and minor field of specialization.

FIRST YEAR

| | | | | | |
|-------------------------|---|--------------------|---|--------------------------|---|
| *Education Survey (407) | 5 | **Science | 5 | **Science | 5 |
| English (401) | 5 | Psychology (401) | 5 | Psychology (407) | 5 |
| Military Science | 2 | Military Science | 2 | Military Science | 2 |
| Physical Education | 1 | Physical Education | 1 | Physical Education | 1 |
| ***Elective | 5 | Elective | 5 | Physical Education (400) | 1 |
| | | | | Elective | 5 |

SECOND YEAR

| | | | | | |
|-----------------------|----|-----------------------|---|-----------------------|----|
| ****Social Science | 5 | Education (533) | 4 | Education (534) | 4 |
| Military Science | 2 | ****Social Science | 5 | Military Science | 2 |
| Physical Edu. (Women) | 1 | Military Science | 2 | Physical Edu. (Women) | 1 |
| Elective | 10 | Physical Edu. (Women) | 1 | Elective | 11 |
| | | Elective | 6 | | |

†THIRD YEAR

| | | | | | |
|----------|----|----------|----|--------------------------------|----|
| Elective | 16 | Elective | 15 | Teaching Methods Course 3 or 5 | |
| | | | | Elective | 12 |

*****FOURTH YEAR

| | | | | | |
|--------------------------------|---|-----------------|----|-------------------|----|
| Teaching Methods Course 3 or 5 | | Education (532) | 5 | ††Education (507) | 3 |
| †Professional Elective | 5 | Elective | 10 | Elective | 12 |
| ††Education (536) | 7 | | | | |

* Students transferring into the College of Education from other colleges of the University or from colleges or universities outside The Ohio State University should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

** Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy, General Studies 431, 432; 451 paired with another appropriate five-hour course.

*** Electives. From the hours designated as "elective" the student is to select (a) those courses needed to complete his program in the teaching fields; (b) free electives. For professional electives see later footnote. In planning his elective program, the student should study the suggestions made in Section IV, page 45.

**** Social Science. Economics 401-402, or Sociology 401 and either 402 or 407, Political Science 401 and either 402 or 410; or Sociology 410 and Economics 406. (Sociology 410 and Economics 406 will not complete the prerequisites for "600" courses in either subject.)

† In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the Director of Student Teaching, Room 103, Arps Hall, their applications for admission to Education 536. Students found eligible will take their student teaching (Education 536) in the following Quarter if practicable.

***** All students must complete registration with the Appointments Office before presenting the schedule for the next to last Quarter for approval.

†† Registration for Education 536 includes the filling out of student-teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall.

‡ Professional Electives. The curriculum requires five hours in professional elective courses in addition to the professional courses specifically required. Courses acceptable as professional electives are listed on page 46.

‡‡ Education 607 should be taken in the senior year, preferably following Education 536.

FRESHMAN ELECTIVES

Students who expect to specialize in the academic fields given below should complete their first Quarter schedule from the courses listed under each field.

English: English 401 or 430.

Classical and Modern Languages: Student who wish to specialize in a classical language or a modern language and have no high school entrance credit should register for the 401 courses—Latin 401, French 401, Spanish 401, etc. Those who enter with one unit should register for the 402 courses. Students with two units should register for the 403 courses, and students with three units should schedule the 404 courses.

Mathematics: Mathematics 421.

Biological Science: Botany 401 or Zoology 401.

Chemistry: Chemistry 411.

Physics: Physics 411.

History and Other Social Studies: History 401 or 403.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

RECOMMENDED PROGRAMS IN ACADEMIC TEACHING FIELDS IN THE GENERAL CURRICULUM

Two major teaching fields or one major and two minor teaching fields are required in the General Curriculum except in the case of history and social studies. This section of the bulletin, pages 49 to 61, includes recommended programs for those major and minor teaching fields which are approved for election under the General Curriculum. (For a general discussion of minor programs, see page 43.) These recommended programs for major and minor teaching fields appear in the following order:

Biological Science. See page 50.

Chemistry. See page 51.

Chemistry-Physics. See pages 51-52.

English. See pages 52-53.

General Science. See page 53.

Geography. See page 54.

COLLEGE OF EDUCATION

Health Education. See page 54.
 The Social Studies. See page 54.
 History. See page 55.
 Latin. See page 56.
 School Library Science. See page 57.
 Mathematics. See page 57.
 Modern Foreign Language. See pages 57-59.
 French
 German
 Spanish
 Physics. See page 59.
 Psychology and Guidance. See page 60.
 Speech. See pages 60-61.

BIOLOGICAL SCIENCE—MAJOR TEACHING FIELD

| | |
|---|----------|
| Botany 401, 402—General Botany | 10 hours |
| Zoology 401, 402—General Zoology | 10 hours |
| Botany 406—Local Flora | 5 hours |
| Zoology 408—Ornithology | 8 hours |
| Entomology 450—General Entomology | 5 hours |
| Bacteriology 509—Microbiology in Relation to Man | |
| or | |
| Bacteriology 607—General Bacteriology | 5 hours |
| One additional "600" course from suggested list below | 5 hours |
| Minimum Total Requirement | 48 hours |
| Teaching Methods Course—Education 682 | |

If possible, and to be better qualified as a high school biology teacher, ten or more Quarter hours should be elected from the following:

Physiology 403, 404—Elementary Physiology
 Botany 605, 606—Plant Physiology
 Zoology 408—General Principles of Heredity
 Zoology 609—Animal Microtechnic
 or
 Zoology 625-626-627—Advanced Zoology of Invertebrates
 or
 Zoology 620—Advanced Zoology of Vertebrates
 Botany 613-614—General Morphology
 Botany 615—Plant Microtechnic
 or any of the "600" courses in botany, physiology, zoology, or bacteriology, subject to the approval of the student's adviser.

Students specializing in biological science are expected to have a satisfactory knowledge of elementary chemistry. College credit in Chemistry 411 and 412, or 407 and 408, or one unit of high school credit in chemistry and satisfactory achievement on a chemistry placement test will meet this requirement. This placement test will be given by the Department of Chemistry at the beginning of each Quarter. Applications to take the test should be filed in the office of the Division of General Chemistry, Room 115, Chemistry Building, by the first day of the Quarter.

BIOLOGICAL SCIENCE—MINOR TEACHING FIELD

Prerequisite: One high school unit.

Minimum requirement: 23 Quarter-credit hours.

Courses recommended: Botany 401, 402, 10 hours; Zoology 401, 402, 10 hours; and 3 to 5 hours, selected from: Bacteriology 509, Botany 406, Education 540, Entomology 450, Zoology 403, 408—Total 23 to 25 hours.

CHEMISTRY—MAJOR TEACHING FIELD**Required Chemistry Courses**

| | |
|---|-------------|
| Chemistry 411, 412, 413—General Chemistry | 15 hours |
| Chemistry 451, 452—Organic Chemistry | 10 hours |
| And Either: | |
| (a) Chemistry 421, 422, 423, Quantitative Chemistry, 12 hours, or | |
| (b) Chemistry 421, 422, 6 hours, and Chemistry 681, 682, 683, Physical Chemistry, 9 hours | 12-15 hours |
| Minimum Total Chemistry Courses | 37-40 hours |

Required Education Courses

| | |
|---|-----------|
| Education 684—The Teaching of General and Physical Science | 3 hours |
| Education 681—Laboratory Practicum for Teachers of Science (Credit in excess of three hours may be counted as professional elective.) | 3-5 hours |

Recommended Education Course

| | |
|--|---------|
| Education 680—Science Materials for Junior and Senior High Schools | 3 hours |
|--|---------|

CHEMISTRY—MINOR TEACHING FIELD**Required Courses**

| | |
|---|-------------|
| Chemistry 411, 412—General Chemistry | 10 hours |
| Selected from Chemistry 413, 451, 452, 647, 648, 649, 650, or from Agricultural Chemistry courses | 10 hours |
| Education 684—The Teaching of General and Physical Science, 3 hours, or with special permission, either | |
| Education 680—Science Materials for Junior and Senior High Schools, 3 hours, or | |
| Education 681—Laboratory Practicum for Teachers of Science, 3-5 hours | 3-5 hours |
| Total Minimum Requirement | 23-25 hours |

CHEMISTRY-PHYSICS—MAJOR TEACHING FIELD

The following program in Chemistry and Physics is accepted as representing the minimum of preparation for Physical Sciences as a teaching field (major):

Required Science Course

| | |
|---|----------------|
| Chemistry 411, 412—General Chemistry | 10 hours |
| Chemistry 413—Qualitative Analysis | 5 hours |
| Chemistry 451, 452—Organic Chemistry | 10 hours |
| Physics 411, 412, 413—General Physics | 15 hours |
| Physics 616—Advanced Physical Laboratory | 3 to 6 hours |
| Physics—elective approved by adviser, minimum | 4 hours |
| Minimum Total Requirement | 47 to 50 hours |

Required Education Courses

| | |
|--|---------|
| Education 681—Laboratory Practicum for Teachers of Science | 3 hours |
| Education 684—Teaching Methods Course | 3 hours |

Recommended Education Course

| | |
|--|---------|
| Education 680—Science Materials for Junior and Senior High Schools | 3 hours |
|--|---------|

It is recommended that students electing mathematics as a teaching field or as a minor shall elect, in addition to the foregoing sequence, Chemistry 563, Physical Chemistry or one or more of the series of courses, Chemistry 681, 682, 683—Physical Chemistry. The election of one or two Quarters of quantitative analysis is also recommended.

An average point-hour ratio of 2.25 in the group of courses in chemistry and an average point-hour ratio of 2.25 in the group of courses in physics is required for admission to student teaching in either subject.

CHEMISTRY-PHYSICS—MINOR TEACHING FIELD

Required Courses

| | |
|---|-------------|
| Physics 411, 412, 413—General Physics | 15 hours |
| Chemistry 411, 412—General Chemistry | 10 hours |
| Education 684—The teaching of General and Physical Science, 3 hours, or with special permission, either | |
| Education 680—Science Materials for Junior and Senior High Schools, 3 hours, or | |
| Education 681—Laboratory Practicum for Teachers Science, 3-5 hours | 3-5 hours |
| Total Minimum Requirement | 28-30 hours |

ENGLISH—MAJOR TEACHING FIELD

1. All students in the College of Education offering English as one of their teaching fields shall pursue *as a minimum* the following courses in English in approximately the order in which they are here listed: 401; 403 or 507 or 643; 430; 560; 550 or 676; 609; 641; 642—minimum 40 hours. (A student who has completed English 401 should elect English 507 if his grade in English 401 was an "A" or if his grade was a "B" and his instructor recommends his taking 507. Otherwise, he should register in English 403.) The foregoing courses, while constituting a minimum for major certification in English, should be augmented, in every case in which the student's total program will permit, by additional elections from the following courses: English 570, 625, 643, 655, 670, 674, 827, 865.

2. Since acquaintance with numerous related areas of scholarship will enable the teacher of English to make his work increasingly meaningful and rich, it is recommended that English majors elect as many of the following courses as their programs will permit: Fine Arts 501, 502, 503, 508; Music 405, 406, 429; Philosophy 401, 402, 405, 516; History 401, 402, 403, 404, 417; Political Science 401, 402; Sociology 400, 401, 402, 407; Journalism 602, 622; Psychology 683; Education 503, 505, 601, 602, 645.

3. At least twenty hours in the English courses listed in paragraph 1 shall have been completed prior to the student's election of Education 671 and thirty hours prior to the election of Education 670, the required methods (professionalized subject-matter) courses for prospective English teachers.

4. Both Education 670 and 671 are required of all students completing a major teaching field in English, and Education 671 (or Education 670 if the student has credit for 30 hours of English by special permission of the instructor) is required of all students securing a minor in English. Both Education 670 and 671 are prerequisite to supervised student teaching in English (Education 536). One of these courses *must* be elected preceding student teaching; however, the other course may be carried concurrently with Education 536. While Education 670 and 671 are given during the Summer Quarter, they are not open at that time to undergraduate students lacking teaching experience.

ENGLISH—MINOR TEACHING FIELD

Prerequisite: Three high-school units.

Minimum requirement: 25 Quarter-credit hours.

Courses required: English 401 (or 402), 430, 550, 560, Education 671 (or Education 670 by special permission of the instructor).

Additional Courses suggested: English 507, 510, 641, Speech 401.

(See also the recommended courses in other subject-matter areas listed in the second paragraph concerning English majors.)

Quality of attainment: Average of "C" in courses included in minimum requirement and accomplishment of at least "C" quality in English 401 (or 402) and Education 671.

GENERAL SCIENCE—MAJOR TEACHING FIELD

The following required program consisting of elementary courses in science is intended to provide the broad background needed by teachers of general science.

Required Science Courses

| | |
|---|----------|
| Physics 411, 412, 418 | 15 hours |
| Chemistry 411, 412, 418 | 15 hours |
| Zoology 401, 402 | 10 hours |
| Botany 401, 402 | 10 hours |
| At least five hours from the following: | |
| Geology 401, 420; Astronomy 500; Conservation 401 | 5 hours |
| Minimum Total Requirement | 55 hours |

Required Education Courses

Education 684, The Teaching of General and Physical Science (3 hours).
 Education 681, Laboratory Practicum for Teachers of Science (3 hours).
 If credit in this course for more than three hours is obtained, the excess may be counted as professional elective.

Recommended Education Course

Education 680, Science Materials for Junior and Senior High Schools (3 hours)

An average point-hour ratio of 2.0 on the courses in each of the separate subjects included in this group is required in addition to the 2.25 average point-hour ratio for the teaching field as a whole.

In addition to the foregoing required courses, students are urged to elect one or more courses selected from the following:

| | |
|---------------------|------------------------|
| Physiology 403, 404 | Zoology 403 |
| Astronomy 500 | Chemistry 563 |
| Bacteriology 509 | Physical Education 641 |
| Geography 401 | Survey 608 |
| Botany 406 | |

The Secretary of the College is authorized to approve such modifications of the foregoing program as may be justified by the student's total background in natural science.

However, when General Science is used as the only major teaching field in science, courses which are included within the program of this major may be used to meet requirements for *certification* in the respective science fields; i.e., biology, chemistry, physics, and chemistry-physics; they may not, however, be used to meet the College curriculum requirements for minors in these fields.

GENERAL SCIENCE—MINOR TEACHING FIELD

Students desiring approval of a minor in general science should confer with Mr. Bennett, Room 102, or Mr. Cahoon, Room 105, Arps Hall.

GEOGRAPHY—MAJOR TEACHING FIELD

1. All students offering geography as a teaching field should pursue a minimum of 35 hours of course work elected in approximately the following order:

FIRST YEAR: Geography 401, 403

SECOND YEAR: Geography 505

THIRD AND FOURTH YEARS:

Group I: Geography 605, 621, 624, 625 (two courses)

Group II: Geography 608, 604, 651 (two courses)

Group III: Geography 631, 633, 634 (one course)

Group IV: Geography 611, 615, 700 (one course)

The remaining four or six credits may be made up by election of two additional courses from the offerings of the Department of Geography or from the following courses in the Department of Geology: 420, 601, 610.

2. The student preparing to teach physical geography should elect Geography 615 (Climatology) and Geology 601 (Physiography), which may be substituted for the one course required in Group III. Also Geology 610 (Physiography of the United States) may be offered in place of one of the courses required in Group I or Group II.

3. Geography may be combined with history, political science, economics, and sociology as a component of the general social studies field of teaching (see below).

GEOGRAPHY—MINOR TEACHING FIELD

Prerequisite: One high school unit in geography or social science.

Minimum requirement: 23 Quarter-credit hours.

Courses recommended:

FIRST YEAR: Geography 401, 403

10 hours

SECOND YEAR: Geography 505

3 hours

THIRD AND FOURTH YEARS: One course from each of the following four groups:

Group I: Geography 621, 624, 625

Group II: Geography 604, 651

Group III: Geography 631, 633

Group IV: Geography 611, 615

12 hours

Total

25 hours

Geography courses should be elected in approximately the order named above. On the recommendation of the student's adviser or the Chairman of the Department of Geography, substitutions may be permitted if a sound educational reason is offered.

SCHOOL HEALTH EDUCATION

A suggested sequence of courses for students desiring competency in school health education will be found on page 66. Students in the general or special curricula may elect School Health Education as a teaching field. For adjustments of prerequisites for certain courses to meet special needs the student should consult an adviser for the curriculum in the Department of Physical Education.

THE SOCIAL STUDIES—MAJOR TEACHING FIELD

For this major teaching field a minimum total of eighty Quarter hours in social studies subjects is required. This "double-major program" together with a minor teaching field as explained in this section, will be accepted as fulfillment of the requirement of two majors in the General Curriculum for high school

teachers. Graduates who have completed this double-major program will be recommended for certification not only as teachers of history, but also as teachers of any other social studies courses offered in the secondary schools of Ohio. The subject requirements are as follows:

| | |
|---|----------------|
| History 401, 402, 403, 404 | 20 hours |
| Economics 400, 401, 402 (two courses); or 406 | 10 or 5 hours |
| Geography 401, 403 | 10 hours |
| Political Science 401, 402, 403 (two courses) | 10 hours |
| Sociology 401 and either 402 or 407 | 10 or 5 hours |
| Advanced courses (i.e. numbered 500 or above in any one of the above subjects) | 20 to 30 hours |
| Total | 80 hours |
| Education 677 and 678 (methods courses) | 8 hours |

Education 677 should normally precede student teaching; Education 678 and student teaching are to be taken concurrently.

Equivalent courses may be substituted for any of those listed above; but equivalence in all cases is to be decided by an adviser who shall be a professor in the social studies area of teacher preparation. This adviser must approve also the pattern of courses making up the required twenty, twenty-five or thirty hours of advanced work; and on his advice, variation from the above schedule of credit hour requirements may be permitted.

The adviser's written approval in every such instance must be indicated either on the student's schedule card or by a memorandum filed in the office of the Secretary of the College.

It is strongly recommended that students elect additional courses on the "600" level.

In addition to the 2.25 point-hour ratio for the major as a whole, a point-hour ratio of 2.0 in each of the separate subject-matter areas included in the foregoing list is required for admission to student teaching.

Since some diversification of teaching subjects is generally necessary for the successful placement of beginning teachers, students who elect the 80-hour program in social studies will be *required* also to complete a *minor program* in some subject other than history or the social studies. This minor program shall conform to the requirements stated on pages 44 and 50 to 91 of this Bulletin.

SOCIAL STUDIES—MINOR TEACHING FIELD

Prerequisite: One high school unit.

Minimum requirement: 23 Quarter-credit hours.

Courses recommended: Three courses including at least one in Economics and one in Sociology from:

| | |
|--------------------------------|----------|
| Economics 400, 401, 402, 406 | 15 hours |
| Sociology 401, 402, 407, 410 | 5 hours |
| Geography 401 | 3 hours |
| Education 678 (methods course) | 3 hours |
| Total | 23 hours |

Persons completing the foregoing minor program will be eligible for a certificate covering social studies and the included components, i.e., economics, sociology, and geography, and limited to these subjects. Students are advised to add one or more courses in political science in order to strengthen the social studies minor and also to qualify for certification in this subject.

HISTORY—MAJOR TEACHING FIELD

Students desiring to prepare themselves well for the teaching of history in the high school will prefer to work out the full Social Studies Major as described on page 54. However, if good reason can be shown, a major program

in history will be permitted. Of such major the minimum requirements will be as follows:

| | |
|--|----------|
| History 401, 402, 403, 404 (or equivalent) | 20 hours |
| Political Science | 5 hours |
| History courses numbered 600 or above | 20 hours |
| Total | 45 hours |
| Education 677 (methods course) | 5 hours |

HISTORY—MINOR TEACHING FIELD

Prerequisite: Two high school units.

Minimum requirement: 25 Quarter-credit hours.

Courses recommended: Three courses from the following four:

| | |
|--------------------------------|----------|
| History 401, 402, 403, 404 | 15 hours |
| Political Science 401 | 5 hours |
| Education 677 (methods course) | 5 hours |
| Total | 25 hours |

Equivalent credits will be accepted with the approval of a professor in the social studies area (Room 103, Arps Hall).

LATIN—MAJOR TEACHING FIELD

The teaching field in Latin is based on three or four years of high school preparation and requires a minimum of 41 Quarter hours of college credit in Latin courses as outlined in the list below. Students who elect more than one course in a given Quarter should distribute their courses among the three types of work: reading courses, lecture courses, and professional work.

Students with two years of high school Latin may elect Latin 404 and 405; upon completion of these courses with a grade of "B," such students may continue with Latin 408 and thereafter return to the normal sequence.

FIRST YEAR: Latin 406 (5), 407 (5), 408 (5)

SECOND YEAR: Latin 502 (3), 501 (3), and 505 (3), 503 (3)

THIRD YEAR: Latin 507 or 608 (3), 612 (3), 616 (3)

FOURTH YEAR: Latin 617 (3), 615 (3)

Alternate courses in third or fourth year with approval of adviser:

Latin 631 (1 to 6), 650 (3); History 656 (3). If possible, both Latin 507 and 608 and all of the alternate courses should be added.

Professional: Third year, Spring—Education 694 (3), methods;

Fourth year, Autumn or Spring—Education 536 (7), student teaching.

NOTE: Not more than one or two courses should be scheduled during the Quarter of student teaching and those should come in the late afternoon if possible, except on Thursday (4 to 6) which must be kept free for conferences.

NOTE: Of particular importance to teachers are Latin 505, 507, 608, 612, 615, 616, 617.

LATIN—MINOR TEACHING FIELD

Prerequisite: Two or more high school units.

Minimum requirement: 23 Quarter-credit hours, based on two units.

Courses recommended: Based on two high school units: Latin 404, 405; based on four high school units: Latin 406, 407; to be followed in either case by additional courses (which may include Education 694, 3 hours) to be approved by the Department of Classical Languages—Total 23 hours.

SCHOOL LIBRARY SCIENCE—MINOR TEACHING FIELD*Minimum requirement:* 24 Quarter credit hours.*Courses required:*

| | |
|---|----------------|
| Education 503—Organization and Administration of the School Library | 3 hours |
| Education 521—Children's Literature | 3 hours |
| Education 550—Library Materials for the Secondary School | 3 hours |
| Education 551—Classifying and Cataloging the School Library | 2 hours |
| Education 552—Practice Library Work | 4 hours |
| Education 646—Enriching Curriculum Units through the Use of the Library | 3 hours |
| Education 647—Reference Work in the School Library | 3 hours |
| Education 648—Library Guidance for the Adolescent Reader | 3 hours |
| | <hr/> 24 hours |

Persons completing the foregoing minor will be eligible to have this minor included on the provisional high school teacher's certificate, thus being eligible for service as a teacher-librarian.

MATHEMATICS—MAJOR TEACHING FIELD**Required Mathematics Courses**

| | |
|--|----------------|
| Mathematics 421—College Algebra | 5 hours |
| Mathematics 422—Trigonometry | 5 hours |
| Mathematics 423—Analytical Geometry | 5 hours |
| Mathematics 441-442—Calculus | 10 hours |
| Mathematics 621—Higher Geometry | 5 hours |
| Mathematics 641—Elementary Theory of Equations | 5 hours |
| Mathematics 623—Projective Geometry | 5 hours |
| | <hr/> 40 hours |

Required Education Course

| | |
|--|---------|
| Education 687—The Teaching of Mathematics in Secondary Schools | 5 hours |
|--|---------|

Recommended Courses

| | |
|--|---------|
| Mathematics 429—Mathematics of Finance | 5 hours |
| Mathematics 435—Elementary Mathematical Statistics | 5 hours |
| Mathematics 443—Calculus | 5 hours |
| Education 502—General Aviation Survey | 5 hours |
| Education 688—Mathematics Materials for Junior and Senior High Schools | 3 hours |
| Education 689—Field and Laboratory Work for Teachers of Mathematics | 3 hours |

MATHEMATICS—MINOR TEACHING FIELD*Prerequisite:* Two high school units.*Minimum requirement:* 23 Quarter-credit hours.*Courses recommended:* Mathematics 421, 422, 423 and 441—20 hours.

Education 687—5 hours. Total 25 hours.

MODERN FOREIGN LANGUAGES—MAJOR TEACHING FIELD**Competencies Required**

First Stage. A mastery of: (a) reading; (b) aural comprehension; (c) pronunciation; (d) functional grammar; (e) written composition; (f) oral composition; to the point where the student is able to read ordinary French, Spanish, or German literature, to understand simple speech; and to express simple ideas in writing or speech.

Second Stage. A mastery of: (a) the principles of phonetics and an accurate pronunciation; (b) oral classroom composition and conversation; (c) functional grammar, syntax, and written composition; (d) French, Spanish, or German culture and civilization sufficient to enable the prospective teacher to achieve the objectives of the teaching of modern languages in the high school.

A knowledge of the history of the literature, of the economic, political, social and intellectual life, of the painting, sculpture, and architecture of the people whose language is being studied, may be acquired either in courses or by private study. (Courses available in allied departments suitable for these needs are: *French*: History 625, Fine Arts 677; *German*: History 629, Fine Arts 680; *Spanish*: History 645-646, Fine Arts 674; *General*: Economics 671.)

Third Stage. A mastery of the objectives, principles, techniques, and practices of teaching the subject concerned sufficient for the student to teach with reasonable efficiency in the high school upon graduation.

Courses Required

First Stage. Students who have not had two years of high school preparation sufficient to pass the Placement Tests (see German, page 174; French and Spanish, page 250) will take courses 401 and 402, respectively, to satisfy this deficiency. Students whose preparation or whose Placement Test score attests a standing more advanced than the equivalent of 402 will receive appropriate credit to apply on major requirements and will start on the next course in the sequence below.

French or Spanish 403 (5); 404 (5); 410 (5) 417 (5)—20 hours.

German: 403 (5); 404 (5); 507 (5); five hours chosen from 575 (5), 576 (5); or 577 (5). 416-417-418 will be accepted as equivalent to 401-404, inclusive—20 hours.

Second Stage. (The courses below need not be taken in the order listed).

French: 632 (5); 628 (5); and a minimum of six hours of advanced conversation chosen from: 520 (5), 619 (3), 635 (3), or 636 (3); and a minimum of 5 hours of "600" literature courses. (French 627 (3) may replace 632.)—21 hours.

Spanish: 620 (5); 617 (5); and a minimum of six hours of advanced conversation chosen from: 605 (3), 606 (3), 623 (3) or the equivalent; and a minimum of 5 hours of "600" literature courses. (Spanish 618 (3) may replace 617.)—21 hours.

German: 500 (3); 691 (2); 685 (3); 656 (3); 673 (3); and a minimum of 9 hours of literature courses (see German, page 172). German 691, 685, 656, and 673 are offered in alternate years and will be taken therefore either in the junior or senior years; 675 (3) is also strongly recommended for majors.)—23 hours.

Minimum total requirement (beyond 402) French or Spanish—41 hours; German—43 hours.

Third Stage. Professional Courses.

French or Spanish: Education 692 (5 or 7);* offered Autumn and Summer.

German: Education 690 (3), offered one Quarter only in alternate years; should be taken concurrently with German 691.

Student Teaching: Education 536 (7, 12 or 15)** offered Autumn and Spring.

Minimum Total Professional Requirement: French or Spanish—12-14 hours; German—10 hours.

* Students majoring in both French and Spanish may enroll for both *Techniques* sections (7 hours) see page 143 for description of the course.

** Student teaching in one subject earns 7 hours credit; in a second subject earns 5 additional hours; full time cadet teaching earns a total of 15 hours; registrants should save Thursdays (4 to 6) for conferences.

FRENCH—MINOR TEACHING FIELD

Prerequisite: Two high school units.

Minimum requirement: 25 Quarter-credit hours.

Courses recommended: French 403, 404, 410, 417, 520—Total 25 hours.

In addition, Education 692, 5 hours, is required unless the student has credit for another course in methods of teaching a modern foreign language. Prerequisite for Education 692 is 30 hours collegiate French beyond 402, or 25 hours beyond 402 with a "B" average.

GERMAN—MINOR TEACHING FIELD

Prerequisite: Two high school units.

Minimum requirement: 23 Quarter-credit hours.

Courses recommended: German 403, 404 (10 hours); 500 (3 hours); or 507 (5 hours); 10 hours chosen from 575, 576 or 577—Total 23 or 25 hours.

In addition, Education 690, Teaching of German (3 hours) and German 691, Practical German Pronunciation (2 hours) are required unless the student has credit for another course in methods of teaching a modern foreign language. Students will be admitted to Education 690 with 28 hours of collegiate credit in German beyond 402 or with 23 hours with a "B" average, in German beyond 402.

SPANISH—MINOR TEACHING FIELD

Prerequisite: Two high school units.

Minimum requirement: 23 Quarter-credit hours.

Courses recommended: Spanish 403, 404, 410, 417, 605—Total 23 hours.

In addition, Education 692, 5 hours, is required unless the student has credit for another course in methods of teaching a modern foreign language. Prerequisite for Education 692 is 28 hours collegiate Spanish beyond 402, or 23 hours beyond 402 with a "B" average.

PHYSICS—MAJOR TEACHING FIELD

Required Physics Courses

| | |
|---|-------------|
| Physics 411, 412, 413—General Physics | 15 hours |
| Physics 616 -b, -c, -d -Advanced Physics Laboratory | 9 hours |
| Courses chosen from Physics 608, 609, 610, 612, 618, 622, 630 | 12-16 hours |
| Minimum Total Requirement | 36-40 hours |

Required Education Courses

| | |
|---|-----------|
| Education 684—The Teaching of General and Physical Science | 3 hours |
| Education 681—Laboratory Practicum for Teachers of Science (Credit in excess of 3 hours may be counted as professional elective.) | 3-5 hours |

Recommended Course

| | |
|--|---------|
| Education 680—Science Materials for Junior and Senior High Schools | 3 hours |
|--|---------|

The "600" courses in Physics involve as prerequisites freshman mathematics and two or three Quarters of calculus, a total of 25 or 30 hours. By adding 10 Quarter hours (Mathematics 621 and an additional course, approved by student's adviser) the student may meet the minimum requirement for an acceptable major field of specialization in mathematics.

PHYSICS—MINOR TEACHING FIELD**Required Courses**

| | |
|---|-------------|
| Physics 411, 412, 413—General Physics | 15 hours |
| Physics 616—Advanced Physics Laboratory | 3 hours |
| Astronomy 500 or 501 | 5 hours |
| Education 684—The Teaching of General and Physical Science, 3 hours, or with special permission, either | |
| Education 680—Science Materials for Junior and Senior High Schools, 3 hours, or | |
| Education 681—Laboratory Practicum for Teachers of Science, 3-5 hours | 3-5 hours |
| Minimum Requirement | 26-28 hours |

PSYCHOLOGY AND GUIDANCE—MAJOR OR MINOR FIELD

For professional psychological and guidance work in Ohio schools (i.e., for certification and employment as a school psychologist, guidance worker, or teacher of psychology) the master's degree is required. A major or minor in psychology and guidance should be the undergraduate basis for this degree. An undergraduate major or minor in psychology and guidance may be elected by those students who wish to extend their preparation for the guidance and remedial activities which every teacher has to do.

A student making such election should consult with Dr. John Horrocks of the Department of Psychology for the purpose of planning his program. This should be done not later than the beginning of the junior year.

Students who wish to enroll in Education 537 for supervised practice in school psychological work must have had Psychology 618 or 681 and obtain permission of the department supervisor.

PSYCHOLOGY AND GUIDANCE—MAJOR FIELD

Courses for the major should be selected (with the approval of the adviser) from the following:

| | |
|---|-----------------|
| Psychology 401, 407 | 10 hours |
| Psychology 510, 609, 611, 613, 615, 618, 619, 622, 631, 640, 663, 664, 669, 670, 671, 680, 681, 683, 685, 689, 690, 695, and Educa- tion 699, 750, 751, 752, 755, 756 | 30 hours |
| Total | 40 hours |

PSYCHOLOGY AND GUIDANCE—MINOR FIELD

| | |
|---|-----------------|
| Psychology 401, 407 | 10 hours |
| Psychology 510, 609, 613, 640, 680, 681, 683, 695, and Education 699, 750, 751, 755, 756 | 15 hours |
| Total | 25 hours |

SPEECH—MAJOR TEACHING FIELD

Students in the College of Education who wish to offer speech as a major teaching field must first secure the written approval of the speech adviser of the College (Professor Virginia Sanderson, Room 321, Arps Hall), indicating that they possess adequate speaking voices and satisfactory speech habits. This report will be placed in the student's folder in the College Office.

Since, from the point of view of the public schools of Ohio, the most practical major is a non-specialized major in the field of speech, the following courses are required:

In Public Speaking and Debate: Speech 401, 560, 562, 470.

In Dramatics and Interpretation: Speech 521, 541, 645, 505.

In Speech Re-education: Speech 580, 585, 504, 694.

The preceding courses, totaling 43 hours, may be augmented whenever the student's program will permit, as follows:

1. When the second major is English, additional courses in dramatics and interpretation will be found helpful.
2. When the second major is History, additional courses in public speaking and debate are recommended.
3. When the second major is Psychology, additional courses in speech re-education are advisable.

Education 675 is required of all students completing a major teaching field in speech and should be taken during the Quarter immediately preceding that in which Education 536 (Supervised Student Teaching) is scheduled. A minimum of 20 Quarter hours in speech or special permission of the instructor is prerequisite for admission to Education 675.

SPEECH—MINOR TEACHING FIELD

Students in the College of Education who wish to offer speech as a minor teaching field must first secure the written approval of the speech adviser of the College (Professor Virginia Sanderson, Room 321, Arps Hall), indicating that they possess adequate speaking voices and satisfactory speech habits. This report will be placed in the student's folder in the College Office.

A minor in Speech, with a minimum of 25 Quarter-credit hours, including Education 675, is arranged to meet individual needs. Such a minor is used primarily to strengthen the major teaching field, and is limited, as a teaching minor in Speech, to that division of the field in which course work has been taken. The minors listed for students, majoring in English and history are teaching minors in the fields of dramatics and public speaking respectively, and will be included as such on the provisional high school teacher's certificate. The minor suggested for students majoring in psychology is *not* a teaching minor, but a non-teaching minor, intended to strengthen the major field. It will not be included on the state teacher's certificate.

In order to secure the most effective minor in Speech the following recommendations are made:

1. For an English Major: Speech 580, 401, 521, 541, 505, 645, Education 675.
2. For a History Major: Speech 401, 402, 470, 580, Education 675.
3. For a Psychology Major: Speech 401, 580, 585, 590, 682, 964, 695, Education 675.

For majors in other fields, a teaching minor in Speech, designed to meet specific needs, may be planned.

SPECIAL CURRICULA

BUSINESS EDUCATION CURRICULUM

Students who are preparing for the teaching and supervision of business subjects should register in the College of Education. Those who expect to engage in business should register in the College of Commerce and Administration.

Students interested in qualifying for degrees in both commerce and education should consult the statement on page 102.

This curriculum provides a minimum preparation for the teaching of all phases of business education in secondary schools. It meets the requirements for the teacher's certificate in business education (State Department of Edu-

cation Option I). This certificate is valid for teaching bookkeeping, business arithmetic, business economics, business English, business law, business organization and management, clerical practice, merchandising, retail store selling, salesmanship, secretarial practice, stenography, and typing.

FIRST YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|-----------------------|---------|
| *Education Survey | (407) 5 | Geography | (401) 5 | Psychology | (407) 5 |
| English | (401) 5 | Psychology | (401) 5 | Business Organization | (401) 5 |
| **Science | 5 | **Science | 5 | Geography | (403) 5 |
| Physical Education | 1 | Physical Education | 1 | Physical Education | 1 |
| Military Science | 2 | Military Science | 2 | Military Science | 2 |
| | | Physical Education | (400) 1 | | |

SECOND YEAR

| | | | | | |
|-----------------------|---------|-----------------------|---------|-----------------------|---------|
| ***Education | (401) 0 | ***Education | (402) 0 | ***Education | (403) 0 |
| ***Education | (404) 2 | ***Education | (405) 2 | ***Education | (406) 2 |
| Economics | (401) 5 | Economics | (402) 5 | Accounting | (401) 5 |
| Sociology | (401) 5 | Sociology | (407) 5 | Education | (533) 4 |
| †Education | (505) 3 | Physical Edu. (Women) | 1 | Elective | 6 |
| Physical Edu. (Women) | 1 | Military Science | 2 | Physical Edu. (Women) | 1 |
| Military Science | 2 | Education | (505) | Military Science | 2 |
| | | or other Elective | | Education | (505) |
| | | | | or other Elective | |

***THIRD YEAR

| | | | | | |
|-----------------------|---------|-----------------------|---------|-----------------------|---------|
| Education | (471) 4 | Education | (472) 4 | Education | (473) 4 |
| Business Organization | (700) 5 | Economics | (645) 3 | Business Organization | (716) 4 |
| ††Accounting | (402) 5 | Business Organization | (621) 3 | Business Organization | (625) 3 |
| Elective | 3 | Economics | (522) 4 | Education | (534) 4 |
| | | Elective | 3 | | |

†FOURTH YEAR

| | | | | | |
|-----------------------|---------|-----------------------|---------|-----------------------|---------|
| Education | (721) 3 | Education | (632) 5 | ††Education | (607) 3 |
| †††Education | (536) 7 | Business Organization | (718) 3 | Business Organization | (516) 3 |
| Business Organization | (510) 5 | Business Organization | (504) 3 | Business Organization | (650) 5 |
| | | Elective | 6 | Business Organization | (705) 4 |

* Students transferring into the College of Education from other colleges of the University or from colleges or universities outside The Ohio State University should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

** Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy, General Studies 431, 432; 451 paired with another appropriate five-hour course.

***Students who have had some preparation in shorthand and typing will be given competency tests on the first class day at the beginning of the second year to determine what of these course requirements they have to meet for admission to Education 471.

****In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the Director of Student Teaching, Room 103, Arps Hall, their applications for admission to Education 536. Students found eligible will take their student teaching (Education 536) in the following Quarter if practicable.

†This course is not required, but is recommended to students in Business Education as a means of obtaining field experience.

†† While the minimum requirement of the State Department of Education is met by ten hours of accounting, students who have any expectation of teaching this subject should make further elections of courses in this field.

††† Registration for Education 536 includes the filling out of student-teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall.

†† Education 607 should be taken in the senior year preferably following Education 536.

NOTE: As in all curricula, eligibility for admission to student teaching requires a minimum point-hour ratio of 2.25 in the major. For the purpose of computing this point-hour ratio the following courses are considered as constituting the major: all courses in accounting, business organization, economics, and geography; Education 403, 404, 405, 471, 472, 473.

‡ All students must complete registration with the Appointments Office before presenting the schedule for the next to last Quarter for approval.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements suggested above, the student will be recommended for the degree of Bachelor of Science in Education.

BUSINESS EDUCATION—MINOR TEACHING FIELDS

Students pursuing the General Curriculum for high school teachers of academic subjects or a special curriculum other than the Business Education curriculum may qualify to teach in limited areas of business education by completing one or more of the following options:

| | |
|--|----------|
| (a) Stenography-Typing | 80 hours |
| (b) Bookkeeping-Social Business | 80 hours |
| (c) Salesmanship-Merchandising | 80 hours |
| (d) Bookkeeping | 15 hours |
| (e) Typing—Education 401, 402, 403, and recommendation of the Department | 8 hours |

Students interested in electing one of these options should consult an adviser in business education, Room 115, or in the office of the Junior Dean, Room 106, or Secretary, Room 101, Arps Hall.

DENTAL HYGIENE-EDUCATION CURRICULUM

Dental Hygienists are now being employed to serve on the health staffs in many of the better-organized school systems. The work of the dental hygienist includes dental and oral examination of pupils, technical service, and instruction concerning the principles of dental hygiene. The Dental Hygiene-Education Curriculum, offered jointly by the College of Education and the College of Dentistry provides young women with technical preparation in dental hygiene combined with professional understanding of work in the schools. It leads to the degree Bachelor of Science in Education.

The State Department of Education has approved the curriculum in dental hygiene and will grant dental hygiene graduates a special certificate entitling them to be employed in public schools.

ADMISSION AND REGISTRATION

During the first and fourth years of the curriculum, the student is registered only in the College of Education; during the second and third years, she is registered jointly in the College of Education and the College of Dentistry. Transfer, effective at the beginning of the second year, is made early in the third Quarter of the freshman year. Application is filed for admission to the curriculum in dental hygiene and for transfer to joint registration in the two Colleges at the University Examiner's Office. Admissions to dental hygiene, at present, are limited to thirty-five students annually; selections are made by the University Examiner and a committee of the College of Dentistry on the bases of professional qualifications, as evidenced by course work, and personal qualification. Applicants must have a personal interview with the supervisor of Dental Hygiene. For further specific information concerning the dental hygiene technical program inquiries should be made of the Division of Dental Hygiene, Room 124, Hamilton Hall.

FIRST YEAR

| | | |
|---|----------------------------|----------------------------|
| Education Survey (407) 5 | English (411) 3 | English (412) 3 |
| (Special section with Nursing students) | Psychology (401) 5 | Psychology (407) 5 |
| English (410) 3 | Zoology (401) 5 | (Section for pre-medics) |
| Speech (401) 5 | Home Economics (440) 5 | Zoology (402) 5 |
| Physical Education (410) 3 | Physical Education (412) 1 | *Psychology (408) |
| (Hygiene) | | or Elective 1 |
| Physical Education (411) 1 | | Physical Education (418) 1 |

COLLEGE OF EDUCATION

SECOND YEAR

| | | |
|----------------------------|---------------------------------------|----------------------------|
| Dental Hygiene (401) 3 | Anatomy (504) 5 | Home Economics (561) 3 |
| (Dental Anatomy) | English (510, 540, 550, 560 or 570) 5 | Social Science Elective 5 |
| Sociology (410) 5 | Economics (406) 5 | Dental Hygiene: |
| Home Economics (551) 3 | Physical Education (473) 1 | Dental Anatomy (402) 1 |
| Bacteriology (509) 5 | Physical Education (415) 1 | Dental Prophylaxis (403) 3 |
| Physical Education (414) 1 | | Oral Hygiene (404) 1 |
| | | General Pathology (501) 3 |
| | | Oral Histology (506) 1 |
| | | Physical Education (416) 1 |

THIRD YEAR

| | | |
|----------------------------|-------------------------------------|---------------------------------------|
| *Psychology (690) | Psychology (663) 4 | Psychology (664) 1 or 2 |
| or Psychology (408) 3 | Physical Education (643) 3 | Education (514) 4 |
| Sociology (610) 4 | Dental Hygiene: | Dental Hygiene: |
| Dental Hygiene: | Dental Nursing (503) 1 | Dental Nursing (504) 1 |
| Materia Medica (405) 1 | Dental Materials (505) 4 | Dental Prophylaxis (510) 5 |
| Dental Nursing (502) 1 | Oral Pathology (507) 1 | Oral Hygiene in the Schools (514) 2 |
| Dental Prophylaxis (508) 3 | Dental Prophylaxis (509) 5 | Anesthesia (515) 1 |
| Nursing Technique (511) 1 | Oral Hygiene in the Schools (513) 2 | Office Practice and Economics (516) 2 |
| Roentgenology (512) 2 | | |

FOURTH YEAR

| | | |
|------------------------|--|--|
| Education (505) 5 | Education (537) 7 | Education (607) 3 |
| Field Service special) | Physical Education (692) 3 | Education (664) 3 |
| Education (515) 4 | **Physical Education (645) or Elective 3 | **Physical Education (664) or Elective 3 |
| Elective 6 | Elective 3 | |

*The student must elect either Psychology 408 or 690. She may elect both.

**The student must elect either Physical Education 645 or 644. She may elect both.

REQUIREMENTS FOR THE DEGREE

Upon the satisfactory completion of all requirements as outlined by the College of Dentistry for the certificate of Graduate Dental Hygienist and upon the satisfactory completion of a total of one-hundred and ninety Quarter credit hours under the restriction and requirements described above, the student will be recommended for the degree Bachelor of Science in Education.

REQUIREMENTS OF THE OHIO STATE DENTAL BOARD

In order to practice dental hygiene in the State of Ohio, the graduate of dental hygiene must pass the practical and theoretical examinations given by the Ohio State Dental Board. The time, place, and manner of applying for this examination will be announced to the student during her last Quarter in the division of Dental Hygiene.

FINE ARTS

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION

FIRST YEAR

| | | |
|---------------------------|----------------------|----------------------------|
| *Education Survey (407) 5 | **Science 5 | Psychology (407) 5 |
| **Science 5 | Psychology (401) 5 | English (401) 5 |
| Fine Arts (479) 3 | Fine Arts (423) 5 | Fine Arts (431) 5 |
| Fine Arts (421) 5 | Military Science 2 | Military Science 2 |
| Military Science 2 | Physical Education 1 | Physical Education 1 |
| Physical Education 1 | | Physical Education (400) 1 |

SECOND YEAR

| | | |
|-------------------------|-------------------------|-------------------------|
| ***Social Science 5 | ***Social Science 5 | Education (533) 4 |
| Fine Arts (501) 5 | Fine Arts (502) 5 | Fine Arts (432) 5 |
| Military Science 2 | English (430) 5 | Fine Arts (503) 5 |
| Physical Edu. (Women) 1 | Military Science 2 | Military Science 2 |
| Fine Arts (461) 5 | Physical Edu. (Women) 1 | Physical Edu. (Women) 1 |

†THIRD YEAR

| | | | | | |
|-----------|---------|-----------|---------|-----------|---------|
| Fine Arts | (504) 5 | Fine Arts | (600) 5 | Fine Arts | (527) 5 |
| Education | (696) 3 | Education | (697) 3 | Elective | 10 |
| Education | (682) 5 | Elective | 3 | | |
| Elective | 5 | | | | |

****FOURTH YEAR

| | | | | | |
|-----------|----------------|-----------|---------|--------------|---------|
| Fine Arts | (528 or 644) 5 | Fine Arts | (505) 5 | ††Education | (586) 7 |
| Fine Arts | (562) 5 | Elective | 10 | †††Education | (607) 3 |
| Elective | 5 | | | Elective | 6 |

* Students transferring into the College of Education from other colleges of the University or from colleges or universities outside The Ohio State University should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

** Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy, General Studies 431, 432; 451 paired with another appropriate five-hour course.

*** Social Science. Economics 401-402; Sociology 401-407; or Sociology 410 and Economics 406. (Sociology 410 and Economics 406 will not complete the prerequisites for "600" courses in either subject.)

**** All students must complete registration with the Appointments Office before presenting the schedule for the next to last Quarter for approval.

† In connection with registration for the last Quarter of their third year, all students pursuing this curriculum must file with the Director of Student Teaching, Room 103, Arps Hall, their application for admission to Education 536.

†† Registration for Education 536 includes the filling out of student teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall.

††† Education 607 should be taken in the senior year preferably following Education 536.

NOTE: Preparation in a second teaching field is not required in this curriculum. However, because beginning teachers are generally expected to teach more than one subject, it is strongly recommended that the student in this curriculum, with the approval of his departmental adviser, shall achieve preparation in at least one additional teaching field approaching as nearly as possible to the standard training outlined for the teaching fields of the general curriculum (pages 49 to 61) or in the special curricula (pages 61 to 101.)

NOTE: The sequence of courses in Fine Arts listed by the foregoing curriculum is a suggested sequence only. Students majoring in Fine Arts must secure the approval of the departmental adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by his signature on the Adviser's Approval Card (Form 4676).

NOTE: Students who wish to receive both the degree of Bachelor of Fine Arts and the degree of Bachelor of Science in Education, must complete the required courses for each degree with credits totaling 235 hours. Permission of the School of Fine and Applied Arts must be secured.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

FINE ARTS—MINOR TEACHING FIELD

Minimum requirement: 36 Quarter-credit hours.

Courses recommended: Fine Arts 421, 423, 431, 527, 461, 508, 501, 569—
Total 38 hours.

Any combination of credits presented as a minor for certification which varies from the foregoing list must have the approval of the School of Fine and Applied Arts.

SCHOOL HEALTH EDUCATION

This program is offered by the Department of Physical Education to provide preparation in School Health Education. It may serve as a teaching field for students whose other major is an appropriately related field.

COLLEGE OF EDUCATION

Students who pursue the curriculum in School Health Education are certified by the State Department of Education as teachers of Health Education.

All students who wish to follow this curriculum must have the approval of an adviser in the Department of Physical Education.

†FIRST AND SECOND YEARS

| | | | | | |
|--------------------|-------|---|-------------|-------|---|
| Physical Education | (410) | 3 | *Psychology | (408) | 3 |
|--------------------|-------|---|-------------|-------|---|

***THIRD AND FOURTH YEARS

| | | | | | | | | |
|--------------------|-------|---|--------------------|-------|---|----------------------|-------|---|
| Physical Education | (641) | 3 | Physiology | (507) | 5 | **Physical Education | (644) | 3 |
| Physiology | (506) | 5 | Physical Education | (478) | 1 | | | |
| | | | Physical Education | (643) | 3 | | | |
| | | | Physical Education | (645) | 3 | | | |
| | | | *Psychology | (690) | 3 | | | |

***Six additional hours must be selected from the following:

| | | | | | |
|--------------------|-------|---|-----------------------|--------------|---|
| Psychology | (510) | 3 | Social Administration | (670) | 3 |
| Psychology | (521) | 3 | Social Administration | (671) | 3 |
| Psychology | (609) | 3 | Home Economics | (440) | 5 |
| Psychology | (622) | 3 | Bacteriology | (509 or 607) | 5 |
| Physical Education | (692) | 3 | | | |

†Chemistry 407-408 or 411-412 are prerequisite to Physiology 506 and 507.

*Psychology 408 or 690.

**Elementary Education students may substitute Education 644 for this course.

Secondary Education students may substitute Physical Education 610 for this course.

Speech 504-3 hours, required, and may be counted as a professional elective.

HOME ECONOMICS CURRICULUM

FIRST YEAR

| | | | | | | | | |
|--------------------|-------|---|--------------------|-------|---|--------------------|-------|---|
| *Education Survey | (407) | 5 | Fine Arts | (430) | 5 | Home Economics | (405) | 3 |
| Home Economics | (440) | 5 | Home Economics | (430) | 5 | English | (430) | 5 |
| English | (401) | 5 | Psychology | (401) | 5 | Psychology | (407) | 5 |
| Physical Education | (400) | 1 | Physical Education | (422) | 1 | Home Economics | (450) | 5 |
| Physical Education | (421) | 1 | | | | Physical Education | (428) | 1 |

SECOND YEAR

| | | | | | | | | |
|--------------------|-------|---|--------------------|-------|---|-------------------------|-------|---|
| †Science | | 5 | †Science | | 5 | Home Economics | (431) | 3 |
| Home Economics | (551) | 3 | Home Economics | (441) | 5 | Home Economics | (505) | 3 |
| Fine Arts | (437) | 3 | Economics | (402) | 5 | Social Science Elective | | 5 |
| Economics | (401) | 5 | Physical Education | (426) | 1 | Bacteriology | (509) | 5 |
| Physical Education | (425) | 1 | | | | Physical Education | (427) | 1 |

†THIRD YEAR

| | | | | | | | | |
|----------------|-------|---|----------------|-------|---|----------------|-------|---|
| Home Economics | (506) | 5 | Home Economics | (561) | 3 | Home Economics | (541) | 5 |
| or | | | Home Economics | (503) | 5 | Education | (534) | 4 |
| Home Economics | (512) | | †††Elective | | 5 | Education | (632) | 5 |
| Home Economics | (550) | 3 | | | | †††Elective | | 3 |
| Education | (533) | 4 | | | | | | |
| †††Elective | | 3 | | | | | | |

***FOURTH YEAR

| | | | | | | | | |
|-------------------------|-------|---|---------------|-------|------|---------------------------|-------|---|
| Home Economics | (560) | 3 | ****Education | (526) | 7-12 | **Elective (Professional) | 5 | |
| †††Elective | 6 | | †††Elective | 5 | | ††Education | (607) | 3 |
| Home Economics Elective | 6 | | | | | †††Elective | 7 | |

* Students transferring into the College of Education from other colleges of the University or from colleges or universities outside The Ohio State University should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

** Professional Electives. Each student is expected to elect five hours of professional courses other than the professional courses specifically required by this curriculum. Courses acceptable as professional electives are listed on page 46.

*** All students must complete registration with the Appointments Office before presenting the schedule for the next to last Quarter for approval.

**** Registration for Education 536 includes the filling out of student teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall. Students must also register with the Home Economics Education Division, Room 201, Campbell Hall, before teaching assignments will be made.

† In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the Director of Student Teaching, Room 108, Arps Hall, their applications for admission to Education 536. Students found eligible will take their student teaching (Education 536) in the following Quarter if practicable.

†† Education 607 should be taken in the senior year, preferably following Education 536.

††† Electives from departments other than Home Economics. Credit in Home Economics courses shall be limited to a maximum of sixty Quarter-credit hours.

‡ Science. Two five-hour courses in one of the following sciences: botany, zoology, chemistry. Students who expect to take no more than ten hours of chemistry should take Chemistry 407 and 408.

NOTE: Students pursuing the curriculum in Home Economics must secure the approval of the departmental adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by her signature on the Adviser's Approval Card (Form 4676).

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

HOME ECONOMICS—MINOR TEACHING FIELD

Minimum requirement: 30 Quarter-credit hours.

Courses recommended: For a teaching minor in home economics the State Department of Education of Ohio requires thirty Quarter-credit hours (twenty semester-credit hours). At least eight Quarter-credit hours should be elected from each of the following subject-matter areas: foods and nutrition, clothing and textiles, and homemaking. A course in Home Economics Methods is required. Students interested in planning a minor should consult a home economics adviser in Room 201, Campbell Hall.

Suggested courses: Home Economics 440, 441, 430, 431, 405, 561, 518, 450, 540 (*required*), 506, 512, 570.

INDUSTRIAL ARTS EDUCATION AND INDUSTRIAL-VOCATIONAL EDUCATION

The curriculum in industrial arts education is designed for teachers in elementary, secondary, college, and adult programs. The major in industrial arts education consists of sixty-eight Quarter-credit hours of technical work in education, engineering drawing, industrial engineering, photography, and fine arts, listed in the curriculum of requirements and electives which follow.

Students preparing for teaching in vocational schools and classes in which the work is defined and subsidized by the provisions of the National Vocational Education (Smith-Hughes and George-Deen) Acts should consult with the Vocational Division of the State Department of Education concerning various special requirements for eligibility before working out a special curriculum with the adviser.

Following an orientation obtained in the laboratory of industries (Education 455) and through cooperation with the School of Fine and Applied Arts and the College of Engineering, a student majoring in industrial arts education may, with counsel, specialize in one or more of seven different areas as follows: (1) ceramics, (2) drawing and design, (3) electricity work, (4) industrial arts, or activity work, in the elementary school, (5) metal work, (6) wood and cabinet work, (7) graphic arts. Opportunities for training in other areas of the laboratory of industries are provided in Education 455, which is also used as a medium for professional articulation in the third or fourth year.

INDUSTRIAL ARTS EDUCATION CURRICULUM

FIRST YEAR

| | | | | | |
|--------------------------|---|------------------------------|---|------------------------------|---|
| *Education Survey (407) | 5 | English (411) | 3 | English (412) | 3 |
| English (410) | 3 | Psychology (401) | 5 | Psychology (407) | 5 |
| Education (455) | 4 | Engineering Drawing (400) | 4 | Engineering Drawing (402) | 4 |
| Military Science | 2 | Military Science | 2 | Military Science | 2 |
| Physical Education | 1 | Physical Education | 1 | Physical Education | 1 |
| Physical Education (400) | 1 | Industrial Engineering (404) | 1 | Industrial Engineering (415) | 3 |
| | | or Elective | 3 | | |

SECOND YEAR

| | | | | | |
|-------------------------------|---|-------------------------------|---|-------------------------------|---|
| ***Physics or Chemistry (411) | 5 | ***Physics or Chemistry (412) | 5 | ***Physics or Chemistry (413) | 5 |
| Education (458) | 5 | Military Science (533) | 4 | Military Science (534) | 4 |
| Military Science | 2 | Education | 5 | Education | 6 |
| Industrial Engineering (420) | 5 | **Elective | 6 | **Elective | 6 |

THIRD YEAR

| | | | | | |
|-----------------|---|-----------------|---|-----------------|----|
| Sociology (410) | 5 | Economics (406) | 5 | Education (698) | 3 |
| Education (632) | 5 | Education (655) | 3 | Economics (510) | 3 |
| **Elective | 5 | **Elective | 7 | Elective | 10 |

* Students transferring into the College of Education from other colleges of the University or from colleges or universities outside The Ohio State University should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

** Electives must include courses to complete a sixty-eight hour major requirement in the teaching field approved by the student's adviser and the College of Education, and additional professional courses to make a total of forty-five hours professional credit. Education 565 (5 hours) may be counted toward both the teaching field and the professional requirement. The electives must also include at least twenty-five Quarter hours outside the fields of Industrial Arts.

In planning his elective program, the student should study the suggestions made in Section IV, page 46.

*** Physics 411 and 413 are required. Physics 412 is recommended. When all three are elected, 413 may be credited toward the 68-hour major in Industrial Arts Education.

† In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the Director of Student Teaching, Room 103, Arps Hall, their applications for admission to Education 536.

FOURTH YEAR

| | | | | | |
|-------------------|------|-----------------|----|--------------------|----|
| Education (665) | 5 | Education (465) | 5 | †††Education (607) | 3 |
| ††Education (586) | 7-12 | **Elective | 11 | Elective | 12 |

†† Registration for Education 536 includes the filling out of student teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall.

††† Education 607 should be taken in the senior year, preferably following Education 536.

NOTE: Preparation in a second teaching field is not required in this curriculum. However, because beginning teachers are generally expected to teach more than one subject, it is strongly recommended that the student, with the approval of his Industrial Arts adviser, achieve preparation in at least one additional teaching field approaching as nearly as possible to the standard training outlined for the teaching fields of the general curriculum (pages 49 to 61) or in the special curricula (pages 61 to 101).

NOTE: Students pursuing the curriculum in Industrial Arts must secure the approval of the Industrial Arts adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by his signature on the Adviser's Approval Card (Form 4676).

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

INDUSTRIAL ARTS EDUCATION—MINOR TEACHING FIELD

Minimum requirement: 36 Quarter-credit hours.

Courses recommended: Education 455 (4 or 8 hours), 458 (8 or 12 hours), 565, Engineering Drawing 400, and seven or more hours to be elected from the areas indicated in the paragraph on page 67 immediately preceding the Industrial Arts Education curriculum outline—Total 36 hours.

* Any student wishing to elect this minor should first secure the approval of an adviser in the Industrial Arts area.

MUSIC

ADMISSION TO THE SCHOOL OF MUSIC

METHOD OF ADMISSION

Students desiring to register for admission to a music curriculum must upon matriculation choose a major subject in applied music (performance) and pass an entrance examination in that subject and in elementary theory and sight singing before a committee of the faculty of the School of Music.

The admission of students to the School of Music is in charge of the Entrance Committee which determines the placement of students following examination. Correspondence relating to admission should be addressed to Eugene J. Weigel, Director of The School of Music, Ohio State University, Columbus 10, Ohio.

REGISTRATION FOR ENTRANCE EXAMINATIONS

The procedure for registration will be as follows:

Students must register to secure appointment time and place for entrance examinations. Registration will be in charge of Student Co-ordinator, Mrs. Miriam S. Mooney, Room 1, Page Hall.

1. Registration for music examinations upon arrival on campus, or any time prior to, but not later than Thursday, September 25, 1947 (Autumn Quarter); Friday, January 2, 1948 (Winter Quarter), Friday, March 26, 1948 (Spring Quarter). See the School of Music Co-ordinator, Room 1, Page Hall for assignment. Registration periods are 9-12 A. M., 1-3 P. M.

2. Schedule classes in accordance with the outline of the curriculum of the field of specialization chosen. (See outlines on pages 69-83.)

3. Follow the examination procedure as outlined on pages 69-71.

4. Students who do not qualify by examination will have their schedules adjusted accordingly without penalty.

ENTRANCE EXAMINATION DATES

The music examinations for the Autumn Quarter will be held Thursday and Friday, September 25 and 26. Examinations for the Winter Quarter, 1948 will be held Friday, January 2, 1948. Examinations for the Spring Quarter, 1948 will be held Monday, March 29, 1948. Examination periods are 9-12 A. M., 1-3 P. M.

ADMISSION REQUIREMENTS

1. Students passing the entrance requirements will pursue courses as scheduled. Should any changes be necessary, the students should consult the Freshmen Co-ordinator.

2. *Students failing to pass the entrance examination* will not be permitted to register for Music 401, Music 508 A, B, C, D, E, F, Music 509 A, B, C, D, E, F, or Music 510 A, B, C, D, E, F, but may try to qualify again at the beginning of the next Quarter. The interim may be spent by registering for non-music courses, or in private study to prepare for the next entrance examination. Students who fail to pass the Entrance Examination and who desire to undertake a second examination for admission, are advised to consult the Director of the School of Music. The music entrance examination may not be repeated more than once.

3. Academic credit earned in the intervening registrations between examination periods will be accepted and toward the music degree at the time the student passes the entrance examinations.

ENTRANCE REQUIREMENTS TO THE SCHOOL OF MUSIC

The entrance requirement for all students entering any of music curricula is as follows:

THEORY AND SIGHT SINGING

1. The ability (a) to recognize and write from dictation (either sung or played on the piano) simple tonal groups in any key; (b) to recognize two- and three-part measure and to write from dictation simple rhythms and melodic phrases in these measures.

2. The ability to sing at sight with reasonable accuracy and fluency such music as simple folk tunes and hymns.

3. A knowledge of the rudiments of music, including (a) knowledge of staff degrees; (b) clefs; (c) note values and measure signatures; (d) key signatures; (e) pitch names as represented on the piano and location of whole steps and half steps; (f) major scales.

APPLIED MUSIC (PERFORMANCE)

The special applied music (performance) entrance requirements in the respective applied areas are as follows:

Piano. All major and minor scales played with both hands, M.M., quarter notes-108; two octaves at a moderately fast tempo; three compositions, one from early keyboard music including a choice of Scarlatti, Couperin, Rameau, Purcell, Bach, J. S.; a movement from a sonata by Haydn, Mozart, or Beethoven, and a composition of your own choice from the Romantic or Modern School.

Organ. To enter the four-year course in organ the student in organ should have completed sufficient piano study to enable him to play the requirements for admission to piano as stated above.

Voice. Sing with correct phrasing, good intonation, musical intelligence, and good English diction, three songs, two of which are to be selected from the following list and one to be the candidate's choice. An acceptable rudimentary knowledge of piano will also be required.

| | |
|--|-----------------------------------|
| I'm Wearing Aw'a to the Land O' the Leal— <i>Footé</i> | Passing By— <i>Edward Purcell</i> |
| Out of My Souls Great Sadness— <i>Franz</i> | Gute Nacht— <i>Robert Franz</i> |
| The Sandman— <i>German Folk Song</i> | Sea Fever— <i>John Ireland</i> |
| I Love Thee— <i>Beethoven or Grieg</i> | Hedges Roses— <i>Schubert</i> |
| The Lotus Flower— <i>Schumann</i> | Cradle Song— <i>Brahms</i> |
| I Judge Thee Not— <i>Schumann</i> | Trade Winds— <i>Keel</i> |
| Lascia Ch'ic pianga— <i>Handel</i> | The Cradle— <i>Fouré</i> |
| Slumber Song— <i>Gretchaninoff</i> | Request— <i>Franz</i> |

String Instruments. Two etudes and one large work (a sonata or concerto) either from the following list or of comparable difficulty. Also scales and arpeggi.

VIOLIN

Etudes—*Kreutzer, Rode*
 Sonatas—*Handel, Veracini* E minor
 Concerti—*Mendelssohn* E minor
Bruch G minor

VIOLA

Etudes—*Sitt, Lifschey*
 Sonatas—*Strube*
 Concerti—*Handel* B minor

CELLO

Etudes—*Dotzauer, Alezanian*
 Sonatas—*Marcello* A minor
 Concerti—*Goltermann* No. 4

BASS

Etudes—*Simandl, Hrabe*
 Pieces—*Chapuis* "Fantasie Concertante"
Bottesini "Reverie"

Woodwind Instruments. Three selections from the following list to demonstrate ability to produce good tone and technique adequate to playing literature of the difficulty of Grade III, National Music Competition Festival list. Sight

read a band or orchestra part from Class B or C literature, National Music Competition Festival list.

FLUTE

Sonata I, IV, or V—*Bach*
 Polonaise and Badinage—*Bach*
 Sonata I, III, or VI—*Handel*
 2nd Arabesque—*Debussy*
 Methods
 Book I—*Kohler*
 Part I—*Brooke*
 Method—*Taffanel and Gaubert*
 Advanced Method—*Rubank*

OBOE

Air de la Passion St. Matthew—*Bach*
 Sonata I or II—*Handel*
 Adagio Cantabile—*Beethoven-Andraud*
 Deux Pieces—*Lefebvre*
 Methods
 Part I—*Selmer*
 Method—*Gillet*
 Elementary Method—*Hovey*
 Method—*Labate-Niemann*

CLARINET

Concerto Op. 107—*Mozart*
 Concertino Op. 26—*Weber*
 Concerto I or II—*Weber*
 1st Concertino—*Gaillard*
 Methods
 Book I—*Kloss*
 Part I—*Langenus*
 Part I—*Lazarus*

BASSOON

Concerto in Bb—*Mozart*
 Hungarian Fantasy—*Weber*
 Concerto in F—*Weber*
 Capriccio Op. 14—*Weissenborn*
 Jota Aragonesa—*Hoffman*
 Methods
 Practical School—*Weissenborn*
 Method—*Skornicka*
 Method—*Satzenhoffer*
 Method—*Jancourt*

SAXOPHONE

Fantasy in F minor—*Gurewicz*
 Demande et Reponse—*Coleridge-Taylor*
 Sonata—*Moritz*
 Serenade Espagnol—*Glazounoff*
 Elegie—*Rarat*
 Solo de Concours—*Aubert*
 Methods
 Veroecken
 Cragun II
 Rollinson

Brass Instruments. Three selections from the following list to demonstrate ability to produce good tone and technique adequate to playing literature of the difficulty of Grade III, National Music Competition Festival list; sight read a band or orchestra part from Class B or C literature selected from the National Music Competition Festival list.

HORN

Reverie—*Glazounow-Belaieff*
 Friendship—*Gottwald*
 Les Adieux—*Strauss*
 Nocturne—*Weiman*
 Barcarolle—*Wittman*
 Andante Pastoral—*Geist*
 Adagio in E-Flat—*Mozart*
 Romanze—*Roger*

CORNET OR TRUMPET

Concert-Fantasia—*Corda*
 Josephine—*Kryl*
 Grand Russian Fantasia—*Levy*
 My Regards—*Llewellyn*
 Fancy Free—*Smith*
 Carnival of Venice—*Clarks*
 Atlantic Zephyrs—*Simons*
 Andante and Allegro—*Roparts*

TROMBONE

Memories of the Past—*Smith*
 My Song of Songs—*Smith*
 Longing for Home—*Hartman*
 Thoughts of Yesterday—*Smith*
 Soul of the Surf—*Smith*
 The Grenadier—*Hardy*
 My Regards—*Llewellyn*

BARITONE

Tramp, Tramp—*Goldman*
 Minuet-Scherzo—*Deluca*
 Castles in the Air—*Smith*
 Old Kentucky Home—*Smith*
 Andante and Allegro—*Burat*
 Carnival of Venice—*Clarks*

BASS HORN

Pomposo (BB-Flat)—*Hayes*
 Rocked in the Cradle of the Deep (E Flat)
 —*Rollinson*
 Barbarossa—*Barnhouse*
 King Mydas—*Buchtel*
 Introduction and Rondo—*Buchtel*
 Salamander—*Buchtel*
 Storm King—*Ringleben*

CURRICULUM I

LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION

The following curriculum is offered in the College of Education preparing for *vocal music teaching and supervision* in the public schools.

FIRST YEAR

Suggested Outline of Courses

| | | | | | | | | |
|--------------------|------------------------|---|--------------------|------------------------|---|--------------------|------------------------|---|
| English | (401) | 5 | English | (430) | 5 | **Science or | | |
| *Education Survey | (407) | 5 | Music | (402) | 3 | ***Social Science | | |
| Music | (401) | 3 | Music | (460) | 3 | Psychology | (401) | 5 |
| Music | (510A or B) | 2 | Music | (510A or B) | 2 | Music | (403) | 3 |
| Music | (550) | 0 | Music | (A or F ₁) | 1 | Music | (461) | 3 |
| Music | (A or F ₁) | 1 | Music | (405) | 3 | Music | (510A or B) | 2 |
| Physical Education | | 1 | Physical Education | | 1 | Music | (A or F ₁) | 1 |
| Military Science | | 2 | Military Science | | 2 | Physical Education | | 1 |
| | | | | | | Military Science | | 2 |
| | | | | | | Physical Education | | |
| | | | | | | Hygiene | (400) | 1 |

Freshmen will schedule Autumn Quarter courses as indicated in above outline. Following entrance examinations and admission (See page 69), and for all subsequent Quarters, the student will consult the following advisers concerning details of curriculum and scheduling:

Freshmen, Sophomores—Mrs. Miriam S. Mooney

Juniors, Seniors—Mr. Leeder

BASIC CURRICULUM REQUIREMENTS

All candidates will be required to take the following basic course of study with exceptions only as noted.

1. **Major Instrument.** 18 credit hours.
Music 510A, B, or F. The proficiency and special requirements of each course to be as indicated under the course requirements. The major instrument study shall culminate in a public recital.
2. **Sight Singing and Dictation.** 9 credit hours.
Music 401, 402, 403 or the equivalent.
3. **Theory.** 21 credit hours.
Music 460, 461, 462, 528, 529, 530, 630 or the equivalent.
4. **History and Music Literature.** 9 credit hours.
Music 405, 506, 507 or the equivalent.
5. **Academic Studies.** 40 credit hours.
English 401, 430, **Science, ***Social Science, Psychology 401, 407.
6. **Music Education.** 57 credit hours.
Education Survey *407, Education 520b, 536b, 607, 632, 511 A, B or F, 540, 622, 623, 624, 640.
7. **Ensemble.** 9 credit hours.
Music A, E, F¹, F², or G, of which not less than nine credit hours shall be in Music A.

* Students transferring into the College of Education from other colleges or universities outside the Ohio State University, should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

**Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy.

***Social Science. Economics 401-402, Sociology 401-407, History 401-402, History 403-404, Political Science 401 and 402 or 410, or Geography 401-403.

8. **Optional Studies.** 41 credit hours.

Free choice electives of which not less than 23 credit hours shall be in non-music electives.

SPECIAL CURRICULUM PROVISIONS

In addition to the basic requirements, the student will take or substitute special requirements pertaining to this field as follows:

a. **Major Applied.**

The choice of a major subject in applied music is made at the time of application for admission to the School of Music. The choice may be piano (Music 510A), voice (Music 510B), or organ (Music 510F). Approval of choice is given by the Music Entrance Examination Board following examination (See page 69).

b. Students may substitute, by permission of the piano instructor, not more than 6 credit hours of organ (Music 510F) to meet the piano major requirements, or 6 credit hours of organ (Music 511F) to meet the piano minor requirement.

c. **Concerts and Recitals.**

All students will meet the following recital requirements:

Freshman: Two one-hour class periods plus performance in fortnightly two-hour *Freshman Departmental Recital*. Attendance at all Freshman Departmental Recitals in their respective areas is required of Freshmen.

Departmental Recitals are not open to the public.

Sophomore: Two one-hour class periods plus performance in weekly one-hour *Student Recital*.

Student Recitals are not open to the public.

Junior: Two one-hour class periods culminating in a *Graduating Recital*. Students will be required for graduation to give a satisfactory recital on their major instrument. The music faculty as a whole will pass upon candidate's proficiency. Students failing to pass the Graduating Recital may repeat once. One additional Quarter of preparation will be allowed.

Graduating Recitals are open to the general public, University students, and the University faculty. There is no charge for admission. Recitals are given in Hagerty Hall Auditorium, Tuesdays from 4:00 to 5:00 p. m.

d. **Student Teaching**

(1) All students in this curriculum will register for Education 520b, Supervised Student Teaching in Elementary Schools, and Education 536b, Student Teaching in Secondary Schools. These courses include student teaching in all grades of the school system; lesson plans for the grade teacher, teacher rating; direct contact with supervisory problems.

(2) Limited practice teaching facilities for Education 520b make it necessary to close the course with a maximum enrollment of seven for the Winter Quarter and none in the Summer. Students who fail to meet the requirements for Education 520b by the Winter Quarter of the senior year will take this course in the Spring Quarter of the senior year and Education 536b in the Autumn Quarter of the following year. Selection for placement in student teaching will be made upon the basis of the highest point hour ratio in Music 510A or 510B, 523, 540 and 623.

- (3) At the time of registration for the last Quarter of the third year, students will file their application for admission to Education 536b with the Director of Student Teaching, Room 103, Arps Hall. Students found eligible will take their student teaching (Education 536b) in the following Autumn Quarter, if practicable. Registration for Education 536b includes the filling out of student-teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards may be obtained in Room 103, Arps Hall. Students also will be required to complete registration with the Appointments Office before presenting the schedule for the last Quarter approval.

e. Teaching Minor

It is recommended that students pursuing Curriculum I should complete a teaching minor in some academic subject or in the teaching of *instrumental music* (See page 72). Few beginning teachers secure positions where vocal music only is taught. The usual minors chosen are English, History, and Science, but the student should consult his adviser to determine which subject he should follow. Students who work out a minor should elect also both Education 533 and a methods course in the minor subject.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-five Quarter-credit hours, in addition to the requirements in physical education and military science and under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

Graduates are entitled, without further examination, to a state provisional special certificate valid for four years. The holder of such special certificate is eligible for appointment as teacher or supervisor of vocal music.

During the first four months of the fourth year of teaching under a four-year provisional certificate, the holder thereof may apply for the renewal of said provisional certificate, or its conversion into an eight-year professional certificate may be made permanent upon completion of the necessary requirements by the holder. Definite information on these matters may be obtained directly from the State Department of Education, Columbus 15, Ohio.

Applications for the provisional certificate may be obtained at the College of Education office. All applications for these certificates must be filed in the College office not later than two months previous to the time at which the degree is expected.

VOCAL MUSIC MINOR

Admission: (a) Students desiring to pursue the *Vocal Music Minor* must pass an entrance examination in elementary theory and sight singing and a selected applied subject (voice or piano).

(b) Students will not be permitted to take entrance examinations until they have cleared through the Music Entrance Registrar, Room 1, Page Hall.

(c) The music examination for the Autumn Quarter, 1947, will be held Thursday and Friday, September 25 and 26. The latest day for registration for the examination will be Wednesday, September 24. Examinations for the Winter Quarter, 1948, will be held Thursday, January 2, 1948 and students may register any time previous to the day of the examination.

Examinations for the Spring Quarter, 1948, will be held Monday, March 29, 1948. Students may register any time previous to the day of the examination.

(d) Students will not be permitted to take applied music, 511A B or F, unless taken concurrently with at least one other course as listed under the course requirements.

Minimum requirement: 43 Quarter hours.

Courses required: Music 401, 402, 405, 460, 461, 462, 507, 511A, 402 (6 hours), 511B (6 hours), 550, 622, 624; membership for a minimum of one year in any one of the following organizations: A, E, F-1, or G.

NOTE: The above courses will qualify for certification with a minor in vocal music.

Persons who have completed Music Curriculum II (Instrumental Music) may apply toward the minor in Vocal Music any of the courses listed above which have been completed under Curriculum II.

CURRICULUM II

LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION

The following curriculum is offered in the College of Education preparing for *instrumental music teaching and supervision* in the public schools.

FIRST YEAR

Suggested Outline of Courses

| | | | | | |
|-----------------------|---------|-----------------------|---------|-----------------------|---------|
| English | (401) 5 | English | (430) 5 | **Science | |
| *Education Survey | (407) 5 | Music | (402) 3 | ***Social Science | |
| Music | (401) 3 | Music | (460) 3 | Psychology | (401) 5 |
| Music (510C, D, or E) | 2 | Music | (405) 3 | Music | (403) 3 |
| Music (550) | 0 | Music (510C, D, or E) | 2 | Music | (461) 3 |
| Music (B or D) | 1 | Music (B or D) | 1 | Music (510C, D, or E) | 2 |
| Physical Education | 1 | Physical Education | 1 | Music (B or D) | 1 |
| Military Science | 2 | Military Science | 2 | Physical Education | 1 |
| | | | | Military Science | 2 |
| | | | | Physical Education | |
| | | | | Hygiene | (400) 1 |

* Students transferring into the College of Education from other colleges or universities outside the Ohio State University, should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

**Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy.

***Social Science. Economics 401-402, Sociology 401-407, History 401-402, History 403-404, Political Science 401 and 402 or 410, or Geography 401-403.

Freshmen will schedule Autumn Quarter courses as indicated in above outline. Following entrance examinations and admission (See page 69), and for all subsequent Quarters, the student will consult the following advisers concerning details of curriculum and scheduling:

Freshmen, Sophomores—Mrs. Miriam S. Mooney

Juniors, Seniors—Mr. McBride

BASIC CURRICULUM REQUIREMENTS

All candidates will be required to take the following basic course of study with exceptions only as noted.

1. Major Instrument. 18 credit hours.

Music 510C, D, or E. The proficiency and special requirements of each course to be as indicated under the course requirements. The major instrument study shall culminate in a public recital.

2. **Sight Singing and Dictation.** 9 credit hours.
Music 401, 402, 403, or the equivalent.
3. **Theory.** 24 credit hours.
Music 460, 461, 462, 628, 529, 530, 631, and 632.
4. **History and Music Literature.** 9 credit hours.
Music 405, 506, 507, or the equivalent.
5. **Academic Studies.** 40 credit hours.
English 401, 430; **Science; ***Social Science, Psychology 401, 407.
6. **Music Education.** 52 credit hours.
Education Survey *407, Education 520a, 536a, 607, 632; Music 511A, B, C, D, E, or F, 512A, B, C, D, E, or F, 513, 543, 640, 641, 642H and I.
7. **Ensemble.** 9 credit hours.
Music B, C, D, H or I, or which not less than nine credit hours shall be in B or D.
8. **Optional Studies.** 44 credit hours.
Free choice of electives of which not less than 22 hours shall be in non-music electives.

*Students transferring into the College of Education from other colleges or universities outside the Ohio State University, should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

**Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy.

***Social Science. Economics 401-402, Sociology 401-407, History 401-402, History 403-404, Political Science 401 and 402 or 410, or Geography 401-403.

SPECIAL CURRICULUM PROVISIONS

As part of the basic requirements, the student will take or substitute special requirements pertaining to this field as follows:

a. Major Applied.

The choice of a major instrument in applied music is made at the time of application for admission to the School of Music. The choice may be stringed instruments (Music 510C), woodwind instruments (Music 510D), or brass instruments (Music 510E). Approval of choice is given by the Music Entrance Examination Board following examination. (See page 69).

The requirements include the study of materials and methods, participation in training orchestra (Music H) and on the minor instrument chosen.

c. Concerts and Recitals.

All students will meet the following recital requirements:

Freshman: Two one-hour class periods plus performance in fortnightly two-hour *Freshman Departmental Recital*. Attendance at all Freshman Departmental Recitals in their respective areas is required of Freshmen. Departmental Recitals are not open to the public.

Sophomore: Two one-hour class periods plus performance in weekly one-hour *Student Recital*.

Student Recitals are not open to the public.

Junior: Two one-hour class periods culminating in a *Graduating Recital*. Students will be required for graduation to give a satisfactory recital on their major instrument. The music faculty as a whole will pass upon the candidate's proficiency.

Graduating Recitals are open to the general public, University students, and the University faculty. There is no charge for admission. Recitals are given in Hagerty Hall Auditorium Tuesdays from 4:00 to 5:00 p. m.

d. Student Teaching.

- (1) All students in this curriculum will register for Education 520b, Supervised Student Teaching in Elementary Schools, and Educa-

tion 536b, Student Teaching in Secondary Schools. These courses include student teaching in all grades of the school system; lesson plans for the grade teacher, teacher rating, and direct contact with supervisory problems.

- (2) At the time of registration for the last quarter of the third year, students will file their application for admission to 536b with the Director of Student Teaching, Room 103, Arps Hall. Students found eligible will take their student teaching (Education 536b) in the following Autumn Quarter, if practicable. Registration for Education 536b includes the filling out of student-teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards may be obtained in Room 103, Arps Hall. Students also will be required to complete registration with the Appointments Office before presenting the schedule for the last Quarter approval.

e. Teaching Minor.

It is recommended that students pursuing Curriculum II should complete a teaching minor in some academic subject or in the teaching of *vocal music* (See page 74). Few beginning teachers secure positions where instrumental music only is taught. The usual minors chosen are English, History and Science, but the student should consult his adviser to determine which subject he should follow. Students who work out a minor should elect also both Education 533 and a methods course in the minor subject.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-five Quarter-credit hours, in addition to the requirements in physical education and military science and under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

Graduates are entitled, without further examination, to a state provisional special certificate valid for four years. The holder of such special certificate is eligible for appointment as teacher or supervisor of instrumental music.

During the first four months of the fourth year of teaching under a four-year provisional certificate, the holder thereof may apply for the renewal of said provisional certificate, or its conversion into an eight-year professional certificate. The eight-year professional certificate may be made permanent upon completion of the necessary requirements by the holder. Definite information on these matters may be obtained directly from the State Department of Education, Columbus 15, Ohio.

Application for the provisional certificate may be obtained at the College of Education office. All applications for these certificates must be filed in the College Office not later than two months previous to the time at which the degree is expected.

INSTRUMENTAL MUSIC MINOR

Admission: (a) Students desiring to pursue the *Instrumental Music Minor* must pass an entrance examination in elementary theory and sight singing and a selected applied subject (Orchestral Instrument).

(b) Students will not be permitted to take entrance examinations until they have cleared through the Music Entrance Registrar, Room 1, Page Hall.

(c) The music examinations for the Autumn Quarter, 1947, will be held Thursday and Friday, September 25 and 26. The latest day for registration for the examinations will be Wednesday, September 24. Examina-

tions for the Winter Quarter, 1948, will be held Thursday, January 2, 1948. Students may register any time previous to the day of the examination. Examinations for the Spring Quarter, 1948, will be held Monday, March 29, 1948. Students may register any time previous to the day of the examination.

(d) Students will not be permitted to take applied music 511A, D, E, or 512A, C, D, or E, unless taken concurrently with at least one other course as listed under the course requirements.

Minimum requirement: 42 Quarter hours.

Courses required: Music 401, 402, 405, 460, 461, 506, 507, 511A, C, D, or E (6 hours), 512A, C, D, or E (6 hours), 550, 640, 641, 642; membership for a minimum of one year in any one of the following organizations: B, D, H or I.

NOTE: Persons who have completed Music Curriculum I (Vocal Music) may apply toward the minor in instrumental music any of the courses listed above which have been completed under Curriculum I.

CURRICULUM III

LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION

The following curriculum is offered in the College of Education preparing for *vocal and instrumental music teaching and supervision* in the public schools.

FIRST YEAR

Suggested Outline of Courses

| | | | | | |
|--------------------|---------------------------------|--------------------|---------------------------------|--------------------|---|
| English | (401) 5 | English | (430) 5 | **Science | |
| *Education Survey | (407) 5 | Music | (402) 3 | ***Social Science | |
| Music | (401) 3 | Music | (460) 3 | Psychology | (401) 5 |
| Music | (510A, B, C, D, E, or F) 2 | Music | (405) 3 | Music | (403) 3 |
| Music | (550) 0 | Music | (510A, B, C, D, E, or F) 2 | Music | (461) 3 |
| Music | (A, B, D, or F ¹) 1 | Music | (A, B, D, or F ¹) 1 | Music | (510A, B, C, D, E, or F ¹) 2 |
| Physical Education | 1 | Physical Education | 1 | Physical Education | 1 |
| Military Science | 2 | Military Science | 2 | Military Science | 2 |
| | | | | Physical Education | |
| | | | | Hygiene | (400) 1 |

Freshmen will schedule Autumn Quarter courses as indicated in above outline. Following entrance examinations and admission (See page 69), and for all subsequent Quarters, the student will consult the following advisers concerning details of curriculum and scheduling:

Freshmen, Sophomores—Mrs. Miriam S. Mooney

Junior, Seniors—Mr. McBride

BASIC CURRICULUM REQUIREMENTS

All candidates will be required to take the following basic course of study with exceptions only as noted:

- 1. Major Instrument.** 18 credit hours.
Music 510A, B, C, D, E,, or F. The proficiency and special requirements of each course to be as indicated under the course requirements. The major instrument study shall culminate in a public recital.
- 2. Sight Singing and Dictation.** 9 credit hours.
Music 401, 402, 403 or the equivalent.
- 3. Theory.** 45 credit hours.
Music 460, 461, 462, 528, 529, 530, 630, 631, 632 or the equivalent.

4. **History and Music Literature.** 9 credit hours.
Music 405, 506, 507 or the equivalent.
5. **Academic Studies.** 40 credit hours.
English 401, 430, **Science, *Social Science, Psychology 401, 407.
6. **Music Education.** 68 credit hours.
*Education Survey 407, Education 607, 632, 520a, 536a, 520b, 536b;
Music 511, 512, 513, 540, 543, 622, 623, 624, 540, 640, 641, 642H and I.
7. **Ensemble.** 12 credit hours.
Music A, F¹, less than six credit hours, and B or D, six credit hours.
8. **Optional Studies.** 68 credit hours.
Free choice of electives of which not less than 32 hours shall be in non-music electives.

*Students transferring into the College of Education from other colleges or universities outside the Ohio State University, should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

**Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy.

***Social Science. Economics 401-402, Sociology 401-407, History 401-402, History 403-404, Political Science 401 and 402 or 410, or Geography 401-403.

SPECIAL CURRICULUM PROVISIONS

In addition to the basic requirements, the student will take or substitute special requirements pertaining to this field as follows:

a. Major Applied.

The choice of a major instrument in applied music is made at the time of application for admission to the School of Music. The choice may be piano (Music 510A), voice (Music 510B), stringed instruments (Music 510C), woodwind instruments (Music 510D), brasses (Music 510E), or organ (Music 510F). The approval of choice is given by the Music Entrance Examination Board following examinations. (See page 69.)

- b. Students may substitute, by permission of the piano instructor, not more than 6 credit hours of organ (Music 510F) to meet the piano major requirements, or 6 credit hours of organ (Music 511F) to meet the piano minor requirements.

c. Concerts and Recitals.

All students will meet the following recital requirements:

Freshman: Two one-hour class periods plus performance in fortnightly two-hour *Freshman Departmental Recital*. Attendance at all Freshman Departmental Recitals in their respective areas is required of Freshmen.

Departmental Recitals are not open to the public.

Sophomore: Two one-hour class periods plus performance in weekly one-hour *Student Recital*.

Student Recitals are not open to the public.

Junior: Two one-hour class periods culminating in a *Graduating Recital*. Students will be required for graduation to give a satisfactory recital on their major instrument. The music faculty as a whole will pass upon the candidate's proficiency. Students failing to pass the Graduating Recital may repeat once. One additional Quarter of preparation will be allowed.

Graduating Recitals are open to the general public, University students, and the University faculty. There is no charge for admission. Recitals are given in Hagerty Hall Auditorium, Tuesdays from 4:00 to 5:00 p. m.

d. Student Teaching.

(1) All students in this curriculum will register for Education 520a

and 520b, Supervised Student Teaching in Elementary Schools; and Education 536a and 536b, Student Teaching in Secondary Schools. These courses include student teaching in all grades of the school system; lesson plans for the grade teacher, teacher rating, and direct contact with supervisory problems.

- (2) Limited practice teaching facilities for Education 520a or 520b make it necessary to close the course with a maximum enrollment of seven for the Winter Quarter and none in the Summer. Students who fail to meet the requirements for Education 520a or 520b, by the Winter Quarter of the senior year will take this course in the Spring Quarter of the senior year and Education 536a or 536b in the Autumn Quarter of the following year. Selection for placement in student teaching will be made upon the basis of the highest point hour ratio in Music 510 A, B, C, D, E or F; 523, 540, 623, 640, 641, 642.
- (3) At the time of registration for the last Quarter of the third year, students will file their application for admissions to 536a or 536b, with the Director of Student Teaching, Room 103, Arps Hall. Students found eligible will take their student teaching (536a or 536b) in the following Autumn Quarter, if practicable. Registration for Education 536a or 536b includes the filling out of student-teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards may be obtained in Room 103, Arps Hall. Students also will be required to complete registration with the Appointments Office before presenting the schedule for the last Quarter approval.

e. Teaching Minor.

It is recommended that students pursuing Curriculum III should complete a teaching minor in some *academic subject*. Few beginning teachers secure positions where music only is taught. The usual minors chosen are English, History and Science, but the student should consult his adviser to determine which subject he should follow. Students who work out a minor should elect also both Education 533 and a methods course in the minor subject.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of two hundred and forty-two Quarter-credit hours, in addition to the requirements in physical education and military science and under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

Graduates are entitled, without further examination, to a state provisional special certificate valid for four years. The holder of such special certificate is eligible for appointment as teacher or supervisor of vocal and instrumental music.

During the first four months of the fourth year of teaching under a four-year provisional certificate, the holder thereof may apply for the renewal of said provisional certificate, or its conversion into an eight-year professional certificate. The eight-year professional certificate may be made permanent upon completion of the necessary requirements by the holder. Definite information on these matters may be obtained directly from the State Department of Education, Columbus 15, Ohio.

Application for the provisional certificate may be obtained at the College of Education office. All applications for these certificates must be filed in the College Office not later than two months previous to the time at which the degree is expected.

CURRICULUM V

LEADING TO THE DEGREE OF BACHELOR OF MUSIC

The following curriculum is offered to students who wish to prepare for the B.Mus. in the following special fields of music: a. *Applied Music* with a major in Piano, Organ, Voice, or Orchestral instrument;† b. *Theory*; c. *Church Music*; d. *Radio Music*.

FIRST YEAR

Suggested Outline of Courses

| | | | | | | | |
|--------------------|-------------------------------|---|--------------------|-------------------------------|---|--------------------|-------------------------------|
| English | (401) | 5 | English | (430) | 5 | *Science | |
| Music | (405) | 3 | Music | (402) | 3 | **Social Science | 5 |
| Music | (401) | 3 | Music | (460) | 3 | Music | (506) 3 |
| Music | (509A, B, C, D, | | Music | (509A, B, C, D, | | Music | (403) 3 |
| | E, or F) | 4 | | E, or F) | 4 | Music | (461) 3 |
| Music | (550) | 4 | Music | (A, B, D, or F ¹) | 1 | Music | (509A, B, C, D, |
| Music | (A, B, D, or F ¹) | 1 | Physical Education | | 1 | | E, or F) |
| Physical Education | | 1 | Military Science | | 2 | Music | (A, B, D, or F ¹) |
| Military Science | | 2 | | | | Physical Education | 1 |
| | | | | | | Military Science | 2 |

Freshmen will schedule Autumn Quarter courses as indicated in above outline. Following entrance examinations and admission (See page 69), and for all subsequent Quarters, the student will consult the following advisers concerning details of curriculum and scheduling:

Theory—Mr. Kob

Piano—Miss Hardy

Organ—Mr. Held

Voice—Mr. Gilliland

Stringed Instruments—

Mr. Hardesty

Woodwind Instruments—Mr. McGinnis

Brass Instruments—Mr. Whitcomb

Church Music—Mr. Diercks

Radio Music—Mr. Staiger

BASIC CURRICULUM REQUIREMENTS

All candidates will be required to take the following basic course of study with exceptions only as noted in the special curriculum provisions for each field of specialization.

1. Major Instrument. 36 credit hours.

Music 509A, B, C, D, E, or F. The proficiency and special requirements of each course to be as indicated under the course requirements. The major study shall culminate in a public recital. During the last year of study, the student will be under the supervision of a faculty committee. This subject requires three hours daily practice.

2. Minor Instrument. 12 credit hours.

Music 508A, B, C, D, E, or F.

3. Sight Singing and Dictation. 9 credit hours.

Music 401, 402, 403 or the equivalent.

4. Theory. 36 credit hours.

Music 460, 461, 462, 528, 530, 631, 632, 668, 761, 762, 763 or the equivalent.

5. History and Literature of Music. 15 credit hours.

Music 405, 506, 507 plus two "600" courses to be elected.

†Instruction on the following orchestral instruments will be offered in 1947-1948: Violin, Viola, Violoncello, Contrabass, Flute, Clarinet, Oboe, Bassoon, French Horn, Cornet, Trumpet, Trombone, Baritone Horn, and Bass Horn.

* Science. Two five-hour courses in one of the following: Botany, Zoology, Physiology (requires sophomore standing), Chemistry, Geology, Physics, Astronomy, or General Studies 431, 432.

**Social Science. Economics 401-402, Sociology 401-407, History 401-402, History 403-404, Political Science 401 and 402 or 410, or Geography 401-403.

6. Academic Studies. 45 credit hours.

English 401, 430, *Science, **Social Science, plus electives from the same or other fields in accordance with the special requirements for each major study.

7. Ensemble. 9 credit hours.

During each year the student participates regularly in the work of either the University Orchestra, Chorus, Symphonic Band, and other ensembles (see Music F, page 212). All students specializing in music are required to enroll for at least three years in the major organizations of his field of specialization. For those who complete all other requirements in less than the usual time the number of required hours will be proportionately reduced.

8. Optional Studies. 42 credit hours.

Free choice electives of which not less than 20 hours shall be in non-music subjects.

*Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy, general studies 431, 432.

**Social Science. Economics 401-402, Sociology 401-407, History 401-402, History 403-404, Political Science 401 and 402 or 410, or Geography 401-403.

SPECIAL CURRICULUM PROVISIONS

In addition to the basic requirements, the student will take or substitute the special requirements pertaining to his field of specialization as noted below.

Piano Major

- a. Students may substitute, by permission of the piano instructor, not more than 12 credit hours of organ (Music 509F) to meet the piano requirement in applied music.
- b. Students taking 48 credit hours of piano as a major may elect Music 511B, C, D, E, or F, as a minor but not to exceed 6 credit hours.

Organ Major

- a. Students may substitute, by permission of the organ instructor, not more than 12 credit hours of piano (Music 509A) to meet the organ requirement in applied music.
- b. Students taking 36 credit hours of organ as a major may elect Music 511 A, B, C, D, or E as a minor but not to exceed 6 credit hours.

Voice Major

- a. Piano (Music 511A) required to a minimum of 9 credit hours.
- b. Required Academic Studies: Music 540, 646, Languages, French, German or Italian to a minimum of 20 credit hours.

Orchestral Instrument Major**Theory Major**

- a. Major Instrument. Music 509A, B, C, D, E, or F required to a total of eighteen credit hours. In addition, students whose major instrument is not piano or organ will be required to take six credit hours of 511A or 511F.
- b. Theory courses to a total of 57 credit hours which shall include Music 665, 666, 667, 668, 763, 764, 781, and 782 in addition to the basic requirements.
- c. Students who do not maintain a 3.0 average, or above in the first two years in theory and ear training courses (Music 401, 402, 403, 460, 461, 462, 528, and 529) will not be permitted to continue as a theory major.
- d. A public graduating recital in Applied Music will not be required. In

lieu of a graduating recital a student may submit, during his senior year, several compositions in the smaller forms, or a thesis on some theory problem.

Church Music Major

- a. Major instrument. The student may elect either organ or voice as the major instrument (Music 509F or Music 509B).
- b. Minor instrument. (1) The organ major will take voice (Music 511B) as a minor instrument. (2) The voice major will take either organ (Music 511F) or piano (Music 511A) as a minor instrument. (3) The minimum requirement shall be 12 credit hours.
- c. The student may substitute not more than 12 credit hours of piano (Music 509A) to meet the organ requirement in applied music.
- d. Required Academic Studies: Philosophy 653. Substitute English 529 for English 430.

Radio Music Major

- a. The major instrument study may culminate in a radio recital, public recital or both.
- b. Required Academic Studies: Arts Survey 405, Physics (Acoustics) 645, Speech 510, 515.
- c. Required Professional Studies: Music 651, 652F^a.
- d. Required Laboratory Experience: A minimum of 15 clock hours of radio broadcast experience under the supervision of the faculty adviser in charge.

REQUIREMENTS FOR A DEGREE

The degree of Bachelor of Music (B.Mus.) is conferred by Ohio State University upon the recommendation of the faculty of the School of Music, upon those candidates who have completed satisfactorily the requirements of their major field of study. The minimum total of credit hours is 195, including all prerequisites but exclusive of Physical Education and Military Science. Work done by students before entering the School is accepted for credit if comparable in character and scope to the work given here. Students desiring credit must obtain a transcript of their grades or pass examinations for advanced standing.

NURSING-EDUCATION

CURRICULUM I

TEACHERS IN SCHOOLS OF NURSING

FOR STUDENTS OR GRADUATES OF FOUR-YEAR CURRICULUM IN THE SCHOOL OF NURSING

Students who are enrolled in or who have completed the Four-Year Curriculum in Nursing in the School of Nursing of The Ohio State University may transfer to the College of Education and may qualify for the degree of Bachelor of Science in Education by meeting the following requirements: (a) completion of all courses in the list below; (b) registration for a minimum of four Quarters of residence in the College of Education; (c) completion of a minimum total of 262 Quarter credit hours. In the last year of the four-year

program in nursing, such students may register concurrently in the School of Nursing and the College of Education, working toward the degree in education while completing their senior work in nursing.

| | |
|---|----------|
| Education Survey 501—Introductory Survey in Education..... | 2 hours |
| *English 401—Composition and Reading | 5 hours |
| *Sociology 401—Introductory Sociology | 5 hours |
| *Sociology 407—Educational Sociology | 5 hours |
| *Psychology 407—Educational Psychology | 5 hours |
| Education 533—The Theory and Practices of Secondary School Teaching | 4 hours |
| Education 607—Philosophy of Education | 3 hours |
| Education 632—The History of Modern Education..... | 5 hours |
| Education 685—The Teaching of Nursing | 3 hours |
| Education 686—The Curriculum in Schools of Nursing | 3 hours |
| Nursing 661—Supervised Teaching in Nursing | 7 hours |
| Electives (Education or Psychology) | 5 hours |
| *Public Health Nursing 602—Principles of Public Health Nursing.... | 5 hours |
| Nursing—Advanced nursing electives approved by adviser and Secretary of College | 8 hours |
| Free Electives | 27 hours |

* These courses are generally elected while the student is enrolled in the School of Nursing.

For further information write to the Director of the School of Nursing.

CURRICULUM II

TEACHERS IN SCHOOLS OF NURSING—SCIENCE MAJOR

FOR REGISTERED NURSES, GRADUATES OF APPROVED SCHOOLS OF NURSING

This curriculum is open to registered nurses presenting evidence of (1) having satisfactorily completed the basic nursing curriculum in a school of approved standards; and (2) a minimum of six months experience as a graduate nurse. The minimum requirement for graduation will be one year of such experience including the six months mentioned above; the nurse may plan the remaining six months concurrent to her work in the college or during any interval previous to qualifying for her Education degree. Candidates presenting a year or more of such experience upon enrolment automatically satisfy this condition.

The student pursuing this curriculum will be expected to plan her specialization in one or more fields, other than nursing, for which teachers with nurse's training are needed by schools of nursing. Among suggested fields of specialization are chemistry, bacteriology, physiology and anatomy, or combinations of these. The student is to elect the courses in her fields of specialization under "Electives" in the Curriculum outline.

Each Quarter's schedule and the student's program as a whole must have the written approval of the student's adviser and of the Secretary of the College of Education.

FIRST YEAR

| | | | | | |
|------------------------|---|-----------------|---|----------------------|---|
| Education Survey (501) | 2 | Chemistry (412) | 5 | Physiology (408) | 5 |
| Chemistry (411) | 5 | English (430) | 5 | Psychology (401) | 5 |
| English (401) | 5 | Elective | 6 | Home Economics (551) | 3 |
| *Elective | 5 | | | Elective | 2 |

SECOND YEAR

| | | | | | |
|------------------------------|---|-----------------------|---|--------------------|---|
| Summer Quarter (either term) | | | | | |
| | | Psychology (407) | 5 | | |
| | | Elective | 3 | | |
| General Studies (481) | 4 | General Studies (482) | 4 | Bacteriology (607) | 5 |
| or (401) | 5 | or (402) | 5 | Education (607) | 5 |
| Sociology (533) | 4 | Education (686) | 3 | Education (685) | 3 |
| Elective | 6 | **Education (632) | 5 | Elective | 5 |
| | | Education (685) | 3 | | |

*From the hours designated as elective the student will select (a) courses needed to complete the program in the field of specialization, see below, and (b) free electives.

**With the approval of the student's adviser and the Secretary of the College of Education, other professional courses may be substituted for Education 632.

***THIRD YEAR

| | |
|------------------------------|---|
| Summer Quarter (either term) | |
| ****Professional Elective | 5 |
| Elective | 8 |

| | |
|----------|---------|
| Nursing | (661) 7 |
| Elective | 11 |

***All students must complete registration with Appointments Office before presenting the schedule for the next to last Quarter for approval.

****PROFESSIONAL ELECTIVES. The curriculum requires five hours in professional elective courses in addition to the professional courses specifically required. Courses acceptable as professional electives are listed on page 46.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of two hundred and twenty Quarter-credit hours, including advanced credit allowed for the basic curriculum in nursing, under the restrictions and requirements prescribed above, the student will be recommended for the Degree of Bachelor of Science in Education.

FIELDS OF SPECIALIZATION—SUGGESTED PROGRAMS

The student's program in her fields of specialization for teaching will be planned and approved *individually*, in accordance with the student's background, needs and interests. A minimum of 45 to 50 Quarter hours, including courses specifically required in the foregoing curriculum outline, will be required in the specialization group. In each case the selection of courses must be approved by the adviser in nursing-education and the Secretary of College of Education.

The following course combinations indicate two types of minimum programs which may be elected:

I. Science Combination

Courses may be elected from the following sequences:

| | |
|---|------------------|
| Chemistry 411, 412, 451, 452 | 20 Quarter hours |
| Anatomy 504 | 5 Quarter hours |
| Physiology 403, 404, 405 | 15 Quarter hours |
| Bacteriology—Select from 607, 655, 656, 657 | 10 Quarter hours |
| | 50 Quarter hours |

II. Chemistry

| | |
|-----------|---|
| Chemistry | 45 Quarter hours (including 10 hours in required courses) |
|-----------|---|

CURRICULUM III

TEACHERS OF PSYCHIATRIC NURSING

This curriculum is open to registered nurses presenting evidence of (1) having satisfactorily completed the basic training curriculum in a school of approved standards; and (2) a minimum of six months experience as a graduate nurse. The minimum requirement for graduation will be one year of such experience including the six months mentioned above; the nurse may plan the remaining six months concurrent to her work in the college or during any interval previous to qualifying for her Education degree. Candidates presenting a year or more of such experience upon enrollment automatically satisfy this condition.

The purpose of the program is to prepare teachers and supervisors in the field of Psychiatric Nursing. A careful canvass of leading psychiatric hospitals has been made to select practice fields appropriate to the needs of the nurse teacher and supervisor. As a result arrangements have been made for students to spend one quarter in Chicago, Illinois, at the Chicago State Hospital, an institution of 4600 beds where the Illinois School for Psychiatric Nursing has conducted a program for affiliating nurses for many years. A second and third quarter will be spent at The Institute of Living (formerly The Hartford Retreat), Hartford, Connecticut, a 400-bed private institution. Thus good instruction and experience will be available, and students will have an opportunity to observe and practice nursing in two sections of the country and on

two levels. Applicants who have had psychiatric nursing as part of their undergraduate clinical experience will be given preference, but lack of such experience will not constitute a bar to enrollment.

An applicant may qualify for the program if:

1. She has had experience in psychiatric nursing as a student nurse.
2. As a graduate she has had three months or more supervised experience in the care of the psychiatric patient.
3. Within the first year of her enrollment in the college she
 - a. Arranges to take an undergraduate affiliation for one Quarter (This can be done at Chicago State Hospital) or
 - b. Arranges for graduate experience under supervision for one Quarter. This work is taken to satisfy a deficiency and is in addition to program as explained herein.

Each Quarter's schedule and the student's program as a whole must have the written approval of her adviser and of the Secretary of the College of Education.

FIRST YEAR

| Autumn | | Winter | | Spring | |
|----------------------|---------|-------------------|---------|------------|---------|
| Educational Survey | (501) 2 | Nursing | (610) 3 | English | (401) 5 |
| Political Science | (401) 5 | Political Science | (410) 5 | Education | (533) 4 |
| Psychology | (401) 5 | Psychology | (407) 5 | Psychology | (609) 3 |
| Occupational Therapy | (500) 1 | Sociology | (402) 5 | Psychology | (642) 3 |
| Sociology | (401) 5 | | — | Sociology | (600) 4 |
| | 18 | | 18 | | 19 |
| Summer | | | | | |
| | | English | (430) 5 | | |
| | | Education | (685) 3 | | |
| | | Education | (686) 3 | | |
| | | Psychology | (641) 5 | | |
| | | Psychology | (690) 3 | | |
| | | | — | | |
| | | | 19 | | |

SECOND YEAR

| Autumn | | Winter | | Spring | |
|-----------|---------|----------------|---------|------------|---------|
| Education | (750) 3 | Neurology and | | Nursing | (658) 7 |
| Sociology | (645) 4 | Psychiatry | (605) 3 | (Hartford) | |
| Electives | 11 | Nursing | (657) 7 | | |
| | 18 | at Chicago | — | | |
| | | State Hospital | 10 | | |
| Summer | | | | | |
| | | Nursing | (659) 7 | | |
| | | (Hartford) | | | |

*THIRD YEAR

| Autumn | |
|--------------------|---------|
| Nursing | (661) 7 |
| (Student Teaching) | |
| Education | (607) 3 |
| Electives | 3 |
| | 13 |

*All students must complete registration with Appointments Office before presenting the schedule for the last Quarter for approval.

Recommended Electives

Nursing 602
General Studies 481-482
History 401 and 402 or 403 and 404
Psychology 637

Home Economics 611
Zoology 403
Speech 401
Social Administration 647

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of two hundred and twenty Quarter-credit hours, including advanced credit allowed for the basic curriculum in nursing, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

PHYSICAL EDUCATION—MEN

Students successfully completing this curriculum receive certificates from the State Department of Education in physical and health education. Its purpose is to prepare teachers of school physical and school health education, including athletics, and city and state supervisors of physical and school health education. It provides for recreational leaders, camp counselors, and directors.

NOTE: For an added special competency in health education students should elect from the courses included in the school health education special teaching curriculum.

NOTE: The purpose of this curriculum is the preparation of teachers of physical and school health education, athletic coaches, recreation directors, city and state supervisors, Y.M.C.A. physical directors, and persons for various other types of positions that are open to men trained in this field.

FIRST YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| *Education Survey | (407) 5 | English | (430) 5 | Anatomy | (504) 5 |
| English | (401) 5 | Psychology | (401) 5 | Psychology | (407) 5 |
| Physical Education | (411) 1 | Zoology | (401) 5 | Military Science | 2 |
| Military Science | 2 | Physical Education | (412) 1 | Physical Education | (413) 1 |
| Elective | 5 | Military Science | 2 | Elective | 5 |

SECOND YEAR

| | | | | | |
|--------------------|---------|--------------------|------------|--------------------|---------|
| Chemistry | (407) 5 | ****Social Science | Physiology | (506) 5 | |
| ****Social Science | | Chemistry | (408) 5 | Physical Education | (410) 3 |
| Physical Education | (414) 0 | Physical Education | (415) 0 | Physical Education | (416) 0 |
| Military Science | 2 | Military Science | 2 | Military Science | 2 |
| Elective | 5 | Elective | 5 | Elective | 7 |

THIRD YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| Education | (533) 4 | Physical Education | (446) 3 | Physical Education | (443) 3 |
| Physical Education | (449) 2 | Physical Education | (647) 3 | Physical Education | (549) 3 |
| Physical Education | (691) 3 | Physical Education | (643) 3 | Physical Education | (644) 3 |
| Physiology | (607) 5 | Physical Education | (478) 1 | Physical Education | (648) 3 |
| Elective | 3 | Physiology | (640) 5 | Physical Education | (621) 5 |

FOURTH YEAR

| | | | | | |
|-------------------------|---------|----------------------------|---------|--------------------|---------|
| ††Education | (536) 3 | Physical Education | (682) 5 | ††Education | (536) 4 |
| Physical Education | (685) 3 | Education | (632) 5 | Physical Education | (447) 2 |
| Physical Education | (693) 5 | Physical Education | (645) 3 | Physical Education | (440) 2 |
| Elective (Professional) | 5 | ***Elective (Professional) | 3 | Education | (607) 3 |
| | | | | Elective | 5 |

† In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the Director of Student Teaching, Room 103, Arps Hall, their applications for admission to Education 536. Students found eligible will take their student teaching (Education 536) in the following Quarter if practicable.

* Students transferring into the College of Education from other colleges of the University or from colleges or universities outside The Ohio State University should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

** All students must complete registration with the Appointments Office before presenting their schedules for the next to last Quarter for approval.

*** Professional courses in education or courses in psychology related to teaching. (See pages 45 and 46.)

**** Social Science, Sociology 401 and either 402 or 407; or Sociology 410 and Economics 406. (Sociology 410 and Economics 406 will not complete the prerequisites for "600" courses in either subject.)

†† Registration for Education 536 includes the filling out of student teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall. A minimum point-hour average of 2.25 on all courses in the major elected prior to the Quarter of student teaching is required for admission to student teaching, Education 536. The major includes the courses in physical education, physiology and anatomy.

NOTE: Students who desire to pursue the curriculum in Physical Education should consult with the Chairman of the Department of Physical Education, Men's Division, Physical Education Building, before registering.

NOTE: All students taking Physical Education as a teaching field or for minimum certification credit must secure the approval of the departmental adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by his signature on the Adviser's Approval Card (Form 4676.)

NOTE: Beginning teachers are generally expected to teach more than one subject. It is strongly recommended, therefore, that the student in this curriculum, with the approval of the departmental adviser, shall achieve preparation in at least one additional teaching field as out-

lined for the general curriculum (pages 49 to 61) or the special curricula (pages 61 to 101).

A teaching field (i.e. for certification as a major) in biological science must meet the following requirements: (1) Courses corresponding as closely as possible to the recommended program in biological science on page 46, with any variations therefrom approved by the Secretary of the College or the College adviser for biological science; (2) An average point-hour ratio of at least 2.25 on all courses in the biological science group; (3) Education 534 and 683. These courses may be credited as professional electives if desired.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

PHYSICAL EDUCATION, MEN'S DIVISION—MINOR TEACHING FIELD

Minimum requirement: 24 Quarter-credit hours.

Courses recommended: Non-duplicating courses selected with the approval of the departmental adviser; at least six Quarter-hours from each of the following four groups:

Group I. Principles, Organization, and Administration:

Physical Education *621 and three credits selected from Physical Education 440, 643, 682; Education 642.

Group II. Theory and Practice of Physical Education (Non-competitive activities):

Physical Education 411, 412, 413, **414, **415, **416, 467, 468, 469, 477, 482, 549, 560, 615, 632, 647, 648, 649; Education 505.

Group III. Theory and Practice of Physical Education (Competitive sports):

Physical Education 443, 446, 447, 449, 549, 601, 615, 635; Education 505.

Group IV. School Health Education:

Physical Education 400, 410, 473, 641, 643, 644, 645, 692; Education 664.

NOTE: For graduate courses numbered 800 or above usable on this minor, consult the Department advisers.

* This course, or its equivalent from an accredited college, is required by Ohio State University for all students earning either the minor or the major in physical and school health education.

** These courses carry no University credit, but the State Department will acknowledge one Quarter-hour of credit for each course.

PHYSICAL EDUCATION—WOMEN

REQUIREMENTS FOR STUDENTS SPECIALIZING IN PHYSICAL EDUCATION

Students successfully completing this curriculum receive certificates from the State Department of Education in physical education and school health education. Its purpose is to prepare teachers of school physical and health education, including athletics, and city and state supervisors of physical and school health education. It provides preparation for recreational leaders, camp counselors, and directors.

Students who select Physical Education as a major must attain standards in physical education activities which are set by the department before they may enter the junior professional courses. This will often necessitate taking additional work in "400" courses without credit.

A syllabus containing standards may be obtained from the physical education office.

NOTE: The purpose of this curriculum is the preparation of teachers of physical and school education, recreation, directors, city and state supervisors, Y.W.C.A. physical directors, and persons for various other types of positions that are open to women trained in this field.

FIRST YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| *Education Survey | (407) 5 | Psychology | (407) 5 | Anatomy | (504) 5 |
| Psychology | (401) 5 | English | (430) 5 | ****Social Science | 5 |
| English | (401) 5 | Zoology | (401) 5 | Physical Education | (418) 1 |
| Physical Education | (411) 1 | Physical Education | (412) 1 | Elective | 5 |

SECOND YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| Physical Education | (541) 3 | Physical Education | (410) 3 | Physiology | (506) 5 |
| Physical Education | (414) 1 | Physical Education | (542) 3 | Physical Education | (548) 3 |
| Elective | 3 | Physical Education | (416) 1 | Physical Education | (416) 1 |
| ****Social Science | 5 | Elective | 5 | Elective | 6 |
| Chemistry | (407) 5 | Chemistry | (408) 5 | Speech | (504) 3 |

THIRD YEAR

| | | | | | |
|-------------------------|---------|--------------------|---------|--------------------|---------|
| Education | (533) 4 | Physiology | (640) 5 | Physical Education | (644) 3 |
| Physical Education | (545) 3 | Physical Education | (643) 3 | Physical Education | (633) 5 |
| Elective (Professional) | 5 | Physical Education | (647) 3 | Physical Education | (621) 5 |
| Physiology | (507) 5 | Physical Education | (473) 1 | Physical Education | (648) 3 |
| | | Physical Education | (691) 3 | | |
| | | Elective | 3 | | |

FOURTH YEAR

| | | | | | |
|--------------------|---------|-------------------------|---------|-------------|---------|
| Physical Education | (550) 3 | Education | (632) 5 | ††Education | (536) 3 |
| ††Education | (536) 4 | Physical Education | (682) 5 | Education | (607) 3 |
| Elective | 10 | Physical Education | (645) 3 | Elective | 10 |
| | | Elective (Professional) | 3 | | |

* Students transferring into the College of Education from other colleges of the University or from colleges or universities outside The Ohio State University should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

** All students must complete registration with the Appointments Office before presenting their schedules for the next to last Quarter for approval.

*** Professional courses include courses in education and psychology related to teaching. pages 45 and 46.

**** Social Science. Sociology 401 and either 402 or 407; or Sociology 410 and Economics 406. (Sociology 410 and Economics 406 will not complete the prerequisites for "600" courses in either subject.)

† In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the Director of Student Teaching, Room 103, Arps Hall, their applications for admission to Education 536. Students found eligible will take their student teaching (Education 536) in the following Quarter if practicable.

†† Registration for Education 536 includes the filling out of student teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall.

NOTE: Students who desire to pursue the curriculum in Physical Education should consult with the Chairman of the Department of Physical Education, Women's Division, Pomerene Hall, before registering.

NOTE: All students taking Physical Education as a teaching field or for minimum certification credit must secure the approval of the departmental adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by her signature on the Adviser's Approval Card (Form 4676).

NOTE: Beginning teachers are generally expected to teach more than one subject. It is strongly recommended, therefore, that the student in this curriculum, with the approval of the department adviser, shall achieve preparation in at least one additional teaching field as outlined for the general curriculum (pages 49 to 61) or the special curricula (pages 61 to 101).

A teaching field (i.e. for certification as a major) in biological science must meet the following requirements: (1) Courses corresponding as closely as possible to the recommended program in biological science on page 50; with any variations therefrom approved by the Secretary of the College or the College adviser for biological science; (2) An average point-hour ratio of at least 2.25 on all courses in the biological science group; (3) Education 534 and 633. These courses may be credited as professional electives if desired.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

PHYSICAL EDUCATION—DANCE (WOMEN)

This curriculum prepares students in the field of the dance. Its purposes are: (a) to meet the needs and interest of an increasing number of students who wish to pursue dance as a creative art form, (b) to prepare teachers of dance in the secondary schools, (c) to prepare teachers of dance in colleges and universities.

This curriculum is constructed to continue over a five-year period. However, the Bachelor of Science Degree is awarded at the end of the fourth year, and students completing this curriculum receive an Ohio Teacher's Certificate with Physical Education as a teaching minor. For those students who wish to teach dance at the college level, a Master's Degree is usually a requisite. Departmental advisers are prepared to recommend a fifth year of study in Physical Education leading to the Master of Arts Degree for all those students who wish this additional study.

FIRST YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| Fine Arts | (479) 5 | Fine Arts | (421) 5 | Fine Arts | (431) 5 |
| †Education Survey | (407) 5 | English | (430) 5 | Psychology | (407) 5 |
| English | (401) 5 | Psychology | (401) 5 | Zoology | (401) 5 |
| Physical Education | (411) 1 | Physical Education | (412) 1 | Physical Education | (418) 1 |

SECOND YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|------------------|
| Anatomy | (504) 5 | Sociology | (410) 5 | General Studies | (431) 5 |
| Education | (533) 4 | Physical Education | (410) 3 | Physical Education | (543) 3 |
| Physical Education | (541) 3 | Physical Education | (542) 3 | Physical Education | (416) 1 |
| Physical Education | (414) 1 | Physical Education | (415) 1 | Speech | (504) 3 |
| Elective | 3 | *Elective | 5 | Sociology | (402) or (407) 5 |

††THIRD YEAR

| | | | | | |
|-----------------------|---------|--------------------|---------|-------------------------|---------|
| Speech | (521) 3 | Physical Education | (631) 3 | Physical Education | (632) 3 |
| Physical Education | (550) 3 | Physical Education | (691) 3 | English | (570) 3 |
| Physical Education | (621) 5 | Physical Education | (643) 3 | Sociology | (501) 5 |
| Sociology | (623) 3 | Education | (632) 5 | Elective (Professional) | 3 |
| ***Physical Education | 3 | | | ***Music | 3 |

††FOURTH YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|-------------------------|---------|
| ††Education | (536) 4 | Speech | (542) 3 | Education | (536) 3 |
| Speech | (541) 3 | Philosophy | (515) 5 | Psychology | (630) 5 |
| Education | (607) 3 | Physical Education | (682) 5 | Physical Education | (651) 2 |
| Physical Education | (651) 2 | Physical Education | (651) 2 | Elective (Professional) | 5 |
| Elective | 3 | | | | |

*This must be taken in either History, Political Science or Economics.

**Choice of Physical Education 545, 549, 647, 648.

***Choice of any three-hour music course.

†Students transferring into the College of Education from other colleges of the University or from colleges or universities outside the Ohio State University should elect Education Survey 501, two credit hours, in the first Quarter of residence, instead of Survey 407, five credit hours.

††All students must complete registration with the Appointments Office before presenting their schedules for the next to the last Quarter for approval.

†††In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the Director of Student Teaching, Room 103, Arps Hall, their applications for admission to Education 536. Students found eligible will take their student teaching (Education 536) in the following Quarter if practicable.

****Registration for Education 536 includes the filling out of student teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards may be obtained in Room 103, Arps Hall.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

PHYSICAL EDUCATION, WOMEN'S DIVISION—MINOR TEACHING FIELD

Minimum requirement: 24 Quarter-credit hours.

Courses recommended: Non-duplicating courses selected with the approval of the departmental adviser; at least six Quarter-hours from each of the following four groups:

Group I. Principles, Organization, and Administration:

Physical Education *621, and three credits selected from 643, 682; Education 642.

* This course, or its equivalent from an accredited college, is required for Ohio State University for all students earning either the minor or the major in physical and health education.

Group II. Theory and Practice of Physical Education:

Physical Education 411, 412, 413, 414 or 477, 456, 460, 464, 476, 482, 492, 541, 542, 543, 549, 550, 560, 615, 631, 632, 647, 648, 649; Education 505.

Group III. Theory and Practice of Physical Education:

Physical Education 415 or 470, 414 or 471, 416 or 474, 541, 542, 543, 545, 549, 615, 635, 647, 648; Education 505.

Group IV. School Health Education:

Physical Education 400, 410, 473, 641, 643, 644, 645, 692; Education 664.

NOTE: For graduate courses numbered 800 or above usable on this minor. consult the Department advisers.

SPEECH AND HEARING THERAPY CURRICULUM

The Speech and Hearing Therapy Curriculum is designed to meet the needs of students interested in becoming specialists in speech and hearing therapy in the public schools of Ohio. The speech and hearing expert in either a county or city position must be able to function as a clinician and consultant on both the elementary and secondary school levels and serve handicapped children individually or in small groups. His professional preparation therefore includes extensive course work and clinical practice in the fields of speech and psychology and thorough acquaintance with elementary and secondary school curricula and educational practice.

Before entering upon this special program of study each prospective student must be formally accepted as meeting the personal and physical qualifications necessary for successful work with handicapped children. For this purpose the student should arrange for a conference with the speech adviser of the College (Dr. Virginia Sanderson, 321 Arps Hall).

A student in this curriculum must use his elective hours in general education.

FIRST YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| *Education Survey | (407) 5 | Psychology | (401) 5 | Psychology | (407) 5 |
| Zoology | (401) 5 | Zoology | (402) 5 | Anatomy | (504) 5 |
| English | (401) 5 | Elective | 5 | Elective | 5 |
| Military Science | 2 | Military Science | 2 | Military Science | 2 |
| Physical Education | 1 | Physical Education | 1 | Physical Education | 1 |
| Physical Education | (400) 1 | | | | |

SECOND YEAR

| | | | | | |
|--------------------|---------|--------------------|------------------|--------------------|---------|
| Sociology | (401) 5 | Sociology | (402) or (407) 5 | Education | (533) 4 |
| Speech | (580) 5 | Speech | (585) 3 | Education | (514) 4 |
| Elective | 5 | Psychology | (510) 3 | Speech | (590) 3 |
| Military Science | 2 | Elective | 5 | Elective | 3 |
| Physical Education | 1 | Military Science | 2 | Military Science | 2 |
| | | Physical Education | 1 | Physical Education | 1 |

*Students transferring into the College of Education from other colleges in the University or from colleges or universities outside The Ohio State University should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

COLLEGE OF EDUCATION

THIRD YEAR

| | | | | | |
|------------|---------|------------|---------|------------|---------|
| Speech | (682) 3 | Speech | (688) 3 | Speech | (684) 3 |
| Speech | (694) 3 | Speech | (695) 3 | Speech | (697) 3 |
| Speech | (677) 5 | Psychology | (618) 3 | Psychology | (609) 3 |
| Psychology | (668) 4 | Education | (518) 4 | Psychology | (688) 3 |
| | | Elective | 3 | Elective | 3 |

FOURTH YEAR

| | | | | | |
|------------|---------|------------|---------|-----------|----------|
| Speech | (698) 3 | Psychology | (690) 3 | Education | (537) 10 |
| Speech | (678) 3 | Psychology | (671) 3 | Speech | (688) 3 |
| Education | (675) 5 | Education | (607) 3 | | |
| Psychology | (681) 3 | Elective | 6 | | |
| Elective | 3 | | | | |

Two hundred hours of Clinical Practice in Speech and Hearing Therapy under expert supervision is required for state certification. One hundred hours will be provided for in the Speech Clinic. The remaining one hundred hours of clinical practice which must be done in the public school in partial fulfillment of student teaching requirements will be provided for in Education 537. Education 764, Supervised Teaching in Special Classes, may be substituted for Education 537 by graduate students who have credit for the undergraduate teaching course, or its equivalent.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree Bachelor of Science in Education.

CURRICULUM IN VOCATIONAL TRADES AND INDUSTRIES

This curriculum is designed for the preparation of shop and related-subject teachers in secondary school programs in vocational trades and industries. The major consists of sixty-eight Quarter-credit hours secured through credit for shop experiences (not more than thirty Quarter-credit hours), courses in education, engineering drawing, industrial engineering, photography, and fine arts, listed in the curriculum of requirements and electives which follows:

FIRST YEAR

| | | | | | |
|------------------------|---------|------------------------|---------|--------------------|---------|
| *Survey | (407) 5 | Psychology | (401) 5 | English | (412) 3 |
| English | (410) 3 | Engineering Drawing | (408) 4 | Psychology | (407) 5 |
| Engineering Drawing | (401) 4 | English | (411) 3 | Mathematics | (421) 5 |
| Physical Education | (400) 1 | Physical Education | (402) 1 | Physical Education | (403) 1 |
| Physical Education | (401) 1 | Military Science | (422) 2 | Military Science | (423) 2 |
| Military Science | (421) 2 | Industrial Engineering | (404) 3 | Elective | 3 |
| Industrial Engineering | (418) 3 | or Elective | | | |

SECOND YEAR

| | | | | | |
|------------------------|---------|------------------------|---------|------------------|---------|
| Chemistry | (411) 5 | Chemistry | (412) 5 | Education | (588) 4 |
| ***Education | (575) 3 | ***Education | (576) 3 | ***Education | (577) 3 |
| Sociology | (410) 5 | Industrial Engineering | (420) 5 | Mathematics | (422) 5 |
| Military Science | (424) 2 | Military Science | (425) 2 | Military Science | (426) 2 |
| Electives | 2 or 3 | **Electives | 2 or 3 | **Electives | 3 or 5 |
| Industrial Engineering | (423) 3 | Engineering Drawing | (402) 4 | Chemistry | (413) 5 |
| Photography | (511) 3 | Photography | (511) 3 | Fine Arts | (421) 5 |
| Political Science | (401) 5 | Geography | (401) 5 | | |

†THIRD YEAR

| | | | | | |
|------------------|---------|---------------|---------|------------------|---------|
| Physics | (411) 5 | Education | (534) 4 | Physics | (413) 5 |
| Economics | (401) 5 | ***Education | (579) 3 | ***Education | (580) 3 |
| ***Education | (578) 3 | Economics | (510) 3 | Education | (641) 3 |
| **Electives | 3 or 5 | **Electives | 5 or 7 | Education | (698) 3 |
| Industrial Engr. | (751) 3 | Engr. Drawing | (421) 3 | **Electives | 3 or 5 |
| History | (403) 5 | Physics | (412) 5 | Industrial Engr. | (601) 4 |
| Fine Arts | (421) 5 | History | (404) 5 | Economics | (639) 4 |
| | | | | Geography | (603) 3 |
| | | | | Education | (714) 3 |

FOURTH YEAR

| | | | | | |
|-------------|---------|-------------------|---------|------------------|---------|
| ††Education | (536) 7 | †††Education | (607) 8 | Education | (752) 5 |
| Education | (750) 8 | Economics | (638) 8 | Education | (755) 8 |
| **Electives | 5 or 8 | **Electives | 9-12 | Education | (680) 8 |
| Education | (751) 8 | Engr. Drawing | (422) 8 | Electives | 5 or 7 |
| Education | (677) 5 | Psychology | (510) 8 | Economics | (639) 8 |
| Economics | (637) 5 | Psychology | (613) 8 | Industrial Engr. | (609) 8 |
| | | Political Science | (401) 5 | Psychology | (609) 8 |
| | | Education | (770) 8 | Education | (716) 8 |

* Students transferring into the College of Education from other colleges of the University or from colleges or universities outside the Ohio State University should elect Education Survey 501, two credit hours, in the first Quarter of residence instead of Survey 407, five credit hours.

** Electives must include courses to complete a sixty-eight hour major requirement in the teaching field approved by the student's adviser and the College of Education, and additional professional courses to make a total of forty-five hours professional credit. Education 577 (8 hours) may be counted toward both the teaching field and the professional requirement. Electives in the junior and senior year must be chiefly in the 600 and 700 group and must be approved by the major adviser. The electives must also include at least twenty-five Quarter hours outside the fields of vocational trades and industries.

*** Required in the State plan 4-year vocational provisional certificate.

† In connection with registration for the last Quarter of their third year all students pursuing this curriculum must file with the director of student teaching, Room 103, Arps Hall, their applications for admission to Education 536.

†† Registration for Education 536 includes the filling out of student teacher placement cards. This must be done before the student's schedule will be approved by the Secretary of the College. Blank cards can be obtained in Room 103, Arps Hall.

††† Education 607 should be taken in the senior year, preferably following Education 536.

NOTE: Students pursuing the curriculum in vocational trades and industries must secure the approval of the trades and industries adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by his signature on the Adviser's Approval Card (Form 4676).

NOTE: For men over twenty-five, Military Science is an elective.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

RELATED SUBJECTS

Persons preparing to teach shop mathematics and science should elect in addition to the prescribed courses in mathematics and science; Physics 412 or Chemistry 413. The methods course, Education 680, is a prescribed course.

Persons preparing to teach blueprint reading and drawing should elect in addition to the prescribed courses in drawing Engineering Drawing 402, 421, 422, and Fine Arts 421. The methods course, Education 698, is a prescribed course.

Persons preparing to teach industrial history and other social studies should elect in addition to the prescribed courses in the social studies field History 403 and 404, Geography 401 or 603, Economics 510 and 637, and Education 677.

RENEWAL OF CERTIFICATION

If, during the period that the state four-year provisional certificate is in effect, the holder completes 208 clock-hours of additional training, beyond the 192 clock-hours required for provisional certification, the certificate may be renewed or be converted into an eight-year professional certificate. The latter may be made permanent. Ordinarily 10 clock hours is equivalent to approximately one Quarter-credit hours.

Requirements and suitable electives follow:

Requirements

English 410—(3 hours) English Composition

Education 533—(4 hours) Principles of Secondary Education

Economics, History, Mathematics, or Science (5 hours)

Electives

- Economics 637—(5 hours) Labor Relations (Industrial Relations)
 Education 534—(4 hours) The Theory and Practices in Secondary School Training (Educational Administration)
 Education 641—(3 hours) History and Philosophy of Vocational Education
 Psychology 510—(3 hours) Adolescence
 Education 750—(3 hours) Fundamentals of Guidance (Educational and Vocational Guidance)
 Fine Arts 507—(5 hours) Product Design (Applied Design)
 Sociology 401—(5 hours) Principles of Sociology
 Education 536—(7 hours) Student Teaching
 Education 714—(3 hours) Selection and Organization of Subject Matter in Industrial Education (Developing Content for Shop and Related Subjects)
 Education 716—(3 hours) Administration of Industrial Education in Secondary Schools (Organization and Administration of Vocational Education)

CURRICULUM IN ELEMENTARY EDUCATION**FIRST YEAR**

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| *Education Survey | (407) 5 | Psychology | (401) 5 | Psychology | (407) 5 |
| **Science | 5 | **Science | 5 | English | (430) 5 |
| English | (401) 5 | Geography | (401) 5 | Geography | (403) 5 |
| Military Science | 2 | Military Science | 2 | Military Science | 2 |
| Physical Education | 1 | Physical Education | 1 | Physical Education | 1 |
| | | | | Physical Education | (400) 1 |

*Students transferring into the College of Education from other colleges of the University or from colleges or universities outside the Ohio State University should elect Education Survey 501, two credit hour, in the first Quarter of residence instead of Survey 407, five credit hours.

**Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing).

SECOND YEAR

| | | | | | |
|--------------------|----------------|--------------------|----------------|--------------------|----------------|
| *Sociology | (401 or 410) 5 | *Sociology | (407 or 501) 5 | Education | (514) 4 |
| History | (403) 5 | Education | (513) 4 | or | |
| Music | (546) 5 | History | (404) 5 | History | (404) 5 |
| or | | or | | Music | (547 or 548) 3 |
| Elective | 2 | Education | (514) 4 | Education | (521) 3 |
| Education | (521) 5 | Music | (546) 2 | or | |
| or | | or | | Physical Education | (476) 3 |
| Physical Education | (476) 3 | Music | (547) 3 | Military Science | 2 |
| Military Science | 2 | Military Science | 2 | Physical Education | |
| Physical Education | | Physical Education | | (Women) | 1 |
| (Women) | 1 | (Women) | 1 | | |

*Sociology 407 follows 401. Students having taken 410 may elect one of the following: Sociology 501, 505, or 510.

All students in the Elementary area should seek a quarterly program-planning conference with an adviser in the Elementary Education Office.

THIRD YEAR

| | | | | | |
|-------------|----------------|-------------|----------------|-------------|---------|
| Education | (522) 5 | Education | (632) 5 | Education | (517) 4 |
| or | | Education | (515) 4 | or | |
| Elective | 5 | or | | Elective | 4 |
| Music | (548) 3 | Fine Arts | (569) 5 | Education | (522) 5 |
| or | | Education | (516) 4 | or | |
| *Psychology | 3 | or | | Elective | 5 |
| Education | (515) 4 | Elective | 4 | Fine Arts | (569) 5 |
| or | | Education | (528 or 510) 3 | or | |
| Elective | 4 | *Psychology | | Elective | 5 |
| Education | (510 or 528) 3 | or | | *Psychology | 3 |
| Education | (664) 3 | Elective | 3 | or | |
| | | | | Elective | 3 |

*The student will elect one of the following courses in Psychology during the junior year: Psychology 510, 609, 618, 663, 683, 690.

Fine Arts 569 must be taken in two Quarters but they need not be consecutive.

Education 510 must not be taken prior to Education 515 but may be taken concurrently.

Electives. The students who is following this curriculum must elect at least twenty hours in addition to required courses, in some one selected field, such as English, history, geography, sociology, science, psychology. This work must be chosen from courses in the "600" group. (Ten of the twenty hours in English may be in the "500" group.) In planning his elective program, the student should study the suggestions made in Section IV, page 000 and confer with an adviser in Elementary Education before proceeding.

***FOURTH YEAR

| | | | | | |
|--------------|----------|--------------|----------|--------------|----------|
| *Education | (518) 10 | *Education | (518) 10 | *Education | (518) 10 |
| or | | or | | or | |
| Elective | 10 | Elective | 10 | Elective | 10 |
| Education | (516) 4 | Education | (517) 4 | **Education | (519) 2 |
| or | | or | | ***Education | (607) 3 |
| Elective | 4 | Elective | 4 | or | |
| Education | (528) 3 | Education | (528) 3 | Elective | 3 |
| or | | or | | | |
| Elective | 3 | Elective | 3 | | |
| **Education | (519) 2 | ***Education | (607) 3 | | |
| or | | or | | | |
| Elective | 2 | Elective | 3 | | |
| ***Education | (607) 3 | | | | |
| or | | | | | |
| Elective | 3 | | | | |

*For all students pursuing the elementary curriculum an average point-hour ratio of 2.25 on all required professional courses taken at this University will be required for admission to supervised student teaching (Education 518). Professional courses include Education Survey 407 or 501, Psychology 407, all education courses, Fine Arts 569, Music 546, 547, 548, Physical Education 476.

**Education 519 may be taken concurrently with Education 518 but may not precede it except with special permission.

***Education 607 must be taken concurrently with or following student teaching 518.

****All students must complete registration with the Appointments Office before presenting the schedule for the next to last Quarter for approval.

CERTIFICATION FOR KINDERGARTEN AND PRE-SCHOOL TEACHING

Students who wish to qualify for certification in kindergarten or pre-school teaching will, in addition to the courses listed in the Curriculum in Elementary Education, take the following courses: Education 509, Home Economics 661, Sociology 680. They will also do their supervised student teaching (Education 518) in the kindergarten and the student must so declare when he registers for student teaching.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

CURRICULA LEADING TO THE DEGREE OF BACHELOR OF FINE ARTS

The work in these curricula is offered under the supervision of the School of Fine and Applied Arts. For this reason the degree is conferred by the College of Education in which this School is administered. The general statements regarding required subjects in the teacher-education curricula (pages 42 to 48) do not apply to these curricula.

PAINTING, SCULPTURE, OR DESIGN

This program for professional artists is a general plan for a variety of professions in the Arts, i.e., costume design, interior decoration, industrial design, illustration, advertising art, painting, sculpture and ceramic art. The

basic curriculum may be varied according to the individual field of specialization. For details regarding special programs consult the School of Fine and Applied Arts.

FIRST YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| Education Survey | (407) 5 | Fine Arts | (423) 5 | Fine Arts | (431) 5 |
| Fine Arts | (421) 5 | *Science | 5 | English | (430) 5 |
| *Science | 5 | English | (401) 5 | Psychology | (401) 5 |
| Fine Arts | (479) 3 | Military Science | 2 | Military Science | 2 |
| Military Science | 2 | Physical Education | 1 | Physical Education | 1 |
| Physical Education | 1 | Physical Education | (400) 1 | | |

SECOND YEAR

| | | | | | |
|-----------------------|---------|-----------------------|---------|-----------------------|---------|
| **Social Science | 5 | **Social Science | 5 | Fine Arts | (503) 5 |
| Fine Arts | (504) 5 | Fine Arts | (502) 5 | Fine Arts | (528) 5 |
| Fine Arts | (501) 5 | Fine Arts | (482) 5 | Physical Edu. (Women) | 1 |
| Physical Edu. (Women) | 1 | Physical Edu. (Women) | 1 | Military Science | 2 |
| Military Science | 2 | Military Science | 2 | Elective | 5 |

THIRD YEAR

| | | | | | |
|---------------------|---------|---------------------|---------|---------------------|---------|
| Fine Arts | (527) } | Fine Arts | (505) 5 | Fine Arts | (461) 5 |
| or | 5 | English | (540) 5 | Fine Arts | (644) } |
| Fine Arts | (660) } | ***Foreign Language | (402) 5 | or | 5 |
| Fine Arts | (534) 5 | | | Fine Arts | (645) } |
| ***Foreign Language | (401) 5 | | | ***Foreign Language | (403) 5 |

FOURTH YEAR

| | | | | | |
|-----------|---------|------------|---------|-----------|---------|
| Fine Arts | (661) 5 | Fine Arts | (662) 5 | Fine Arts | (663) 5 |
| Fine Arts | (670) 2 | †Fine Arts | (672) 2 | Elective | 10 |
| Fine Arts | (671) 3 | †Fine Arts | (673) 3 | | |
| Fine Arts | (562) 5 | Elective | 5 | | |

* Science. Two five-hour courses in one of the following sciences: botany, zoology, physiology (requires sophomore standing), chemistry, geology, physics, astronomy, General Studies 431, 432,; 451 paired with another appropriate five-hour course.

** Social Science. Ten hours in any one of the following: sociology, economics, political science or history or General Studies 481-482-483 (fifteen hours); or Sociology 410 and Economics 406. (Sociology 410 and Economics 406 will not complete the prerequisites for "600" courses in either subject.) The subject selected should be one that the student did not take in high school.

***Students who have no credit for a language other than English taken in high school will be required to take three Quarters of one foreign language in the University. Students who have high school credit for units in foreign language may use these in meeting the requirements of three Quarters of one foreign language, or two Quarters each of two foreign languages, on the basis of one Quarter for one unit.

†Ten hours of advanced History of Fine Arts are required. Other courses may be substituted for Fine Arts 672 and 673.

NOTE: Students pursuing the curriculum in Painting, Sculpture, or Design must secure the approval of the department adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by his signature on the Adviser's Approval Card (Form 4676).

NOTE: Students who wish to receive both the degree of Bachelor of Fine Arts and the degree of Bachelor of Science in Education must complete the required courses for each degree with credits totaling 235 hours. Permission of the School of Fine and Applied Arts must be secured.

REQUIREMENTS FOR A DEGREE

Upon satisfactory completion of one hundred and ninety Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Fine Arts.

COMMERCIAL ART

Explanatory notes in regard to requirements in foreign language and procedure for approval of schedules will be found under the curriculum in Painting, Sculpture, or Design on page 96.

FIRST YEAR

| | | | | | | | | |
|--------------------|-------|---|--------------------|-------|---|--------------------|-------|---|
| Education Survey | (407) | 5 | English | (430) | 5 | Psychology | (401) | 5 |
| Fine Arts | (421) | 5 | Fine Arts | (431) | 5 | Fine Arts | (423) | 5 |
| English | (401) | 5 | Fine Arts | (558) | 5 | Fine Arts | (461) | 5 |
| Military Science | 2 | | Military Science | 2 | | Military Science | 2 | |
| Physical Education | 1 | | Physical Education | 1 | | Physical Education | 1 | |
| | | | Physical Education | (400) | 1 | | | |

SECOND YEAR

| | | | | | | | | |
|----------------------------|-------|---|----------------------------|-------|---|----------------------------|-------|---|
| *Social Science | 5 | | *Social Science | 5 | | Fine Arts | (505) | 5 |
| Fine Arts | (504) | 5 | Fine Arts | (432) | 5 | Fine Arts | (528) | 5 |
| Fine Arts | (501) | 5 | Fine Arts | (502) | 5 | Fine Arts | (503) | 5 |
| Military Science | 2 | | Military Science | 2 | | Military Science | 2 | |
| Physical Education (Women) | 1 | | Physical Education (Women) | 1 | | Physical Education (Women) | 1 | |

* Social Science. Economics 401-402; or Sociology 410 and Economics 406. (Sociology 410 and Economics 406 will not complete the prerequisites for "600" courses in either subject.)

THIRD YEAR

| | | | | | | | | |
|-------------|-------|---|-----------------|-------|---|-----------------|--------------|---|
| Photography | (511) | 3 | Fine Arts | (625) | 5 | Fine Arts | (653) | 5 |
| Fine Arts | (651) | 5 | Fine Arts | (652) | 5 | Fine Arts | (660 or 644) | 5 |
| Fine Arts | (527) | 5 | General Studies | (432) | 5 | General Studies | (451) | 5 |
| Elective | 3 | | | | | | | |

FOURTH YEAR

| | | | | | | | | |
|-----------------------|-------|---|-----------------------|-------|---|-----------|-------|---|
| Business Organization | (716) | 4 | Business Organization | (717) | 3 | Fine Arts | (663) | 5 |
| Engineering Drawing | 4 | | Journalism | (503) | 5 | Fine Arts | (534) | 5 |
| Elective or Fine Arts | (661) | 5 | Fine Arts | (662) | 5 | Elective | 5 | |
| Elective | 3 | | Elective | 5 | | | | |

The following are recommended for electives:

| | | | |
|-----------------------|-----|------------|-------------|
| Business Organization | 719 | Fine Arts | 689 |
| Speech | 401 | Journalism | 602 and 603 |
| Psychology | 635 | | |

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Fine Arts.

COSTUME DESIGN

Explanatory notes in regard to requirements in natural science and foreign language and procedure for approval of schedules will be found under the curriculum in Painting, Sculpture, or Design on page 96.

FIRST YEAR

| | | | | | | | | |
|--------------------|-------|---|--------------------|-------|---|--------------------|-------|---|
| Education Survey | (407) | 5 | Fine Arts | (423) | 5 | Fine Arts | (431) | 5 |
| Fine Arts | (421) | 5 | Science | 5 | | English | (430) | 5 |
| Science | 5 | | English | (401) | 5 | Psychology | (401) | 5 |
| Fine Arts | (479) | 3 | Military Science | 2 | | Military Science | 2 | |
| Military Science | 2 | | Physical Education | 1 | | Physical Education | 1 | |
| Physical Education | 1 | | Physical Education | (400) | 1 | | | |

SECOND YEAR

| | | | | | | | | |
|----------------------------|-------|---|----------------------------|-------|---|----------------------------|-------|---|
| *Social Science | 5 | | *Social Science | 5 | | Home Economics | (430) | 5 |
| Fine Arts | (504) | 5 | Fine Arts | (432) | 5 | Fine Arts | (505) | 5 |
| Fine Arts | (501) | 5 | Fine Arts | (502) | 5 | Fine Arts | (503) | 5 |
| Military Science | 2 | | Military Science | 2 | | Military Science | 2 | |
| Physical Education (Women) | 1 | | Physical Education (Women) | 1 | | Physical Education (Women) | 1 | |

* Social Science. Economics 401-402; or Sociology 410 and Economics 406. (Sociology 410 and Economics 406, will not complete the prerequisites for "600" courses in either subject.)

THIRD YEAR

| | | | | | |
|----------------|---------|-----------------------|---------|-----------|---------|
| Home Economics | (481) 3 | Business Organization | (700) 5 | Fine Arts | (644) 5 |
| Fine Arts | (527) 5 | Fine Arts | (532) 5 | Fine Arts | (631) 5 |
| Fine Arts | (487) 3 | Journalism | (508) 5 | English | (540) 5 |
| Elective | 5 | Elective | 5 | | |

FOURTH YEAR

| | | | | | |
|-----------------------|---------|-----------------------|---------|-----------------------|---------|
| Business Organization | (716) 4 | Business Organization | (717) 3 | Business Organization | (719) 4 |
| Fine Arts | (651) 5 | Fine Arts | (557) 5 | Fine Arts | (654) 5 |
| Fine Arts | (670) 2 | Elective | 10 | Elective | 5 |
| Fine Arts | (671) 3 | | | | |

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Fine Arts.

INTERIOR DECORATION

Explanatory notes in regard to requirements in foreign language and procedure for approval of schedules will be found under the curriculum in Painting, Sculpture, or Design on page 96.

FIRST YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| Education Survey | (407) 5 | English | (430) 5 | Fine Arts | (423) 5 |
| Fine Arts | (421) 5 | Fine Arts | (431) 5 | Fine Arts | (461) 5 |
| English | (401) 5 | General Studies | (431) 5 | General Studies | (432) 5 |
| Military Science | 2 | Military Science | 2 | Military Science | 2 |
| Physical Education | 1 | Physical Education | 1 | Physical Education | 1 |
| | | Physical Education | (400) 1 | | |

SECOND YEAR

| | | | | | |
|----------------------------|---------|----------------------------|---------|----------------------------|---------|
| Fine Arts | (501) 5 | Fine Arts | (502) 5 | Fine Arts | (503) 5 |
| Engineering Drawing | (401) 4 | Engineering Drawing | (402) 4 | Fine Arts | (534) 5 |
| Fine Arts | (432) 5 | Home Economics | (512) 5 | *Social Science | 5 |
| Home Economics | (430) 5 | Military Science | 2 | Military Science | 2 |
| Military Science | 2 | Physical Education (Women) | 1 | Physical Education (Women) | 1 |
| Physical Education (Women) | 1 | | | | |

THIRD YEAR

| | | | | | |
|-----------------|---------|--------------|---------|-----------------------|---------|
| Architecture | (421) 5 | Architecture | (402) 3 | Architecture | (423) 5 |
| Fine Arts | (527) 5 | Architecture | (422) 5 | Business Organization | (700) 5 |
| *Social Science | 5 | Psychology | (401) 5 | Fine Arts | (528) 5 |
| | | Elective | 5 | | |

FOURTH YEAR

| | | | | | |
|-----------------------|---------|-----------|---------|-----------|---------|
| Fine Arts | (661) 5 | Fine Arts | (662) 5 | Fine Arts | (663) 5 |
| Business Organization | (705) 4 | Fine Arts | (644) 5 | Elective | 10 |
| Elective | 8 | Elective | 5 | | |

* Social Science. Economics 401-402; or Sociology 410 and Economics 406. (Sociology 410 and Economics 406, will not complete the prerequisites for "600" courses in either subject.)

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety-six Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Fine Arts.

CERAMIC ART

The curriculum in Ceramic Art is planned to train artists with a working knowledge of ceramic technology. The essential practical processes used in manufacturing pottery and porcelain products are included and the arrange-

ment of laboratory courses permits sufficient concentration to meet the demand for highly specialized artists in the various ceramic fields.

FIRST YEAR

| | | | | | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| Education Survey | (407) 5 | Fine Arts | (508) 3 | Fine Arts | (492) 5 |
| Fine Arts | (490) 5 | Fine Arts | (491) 5 | Fine Arts | (481) 5 |
| Chemistry | (411) 5 | English | (410) 3 | English | (411) 3 |
| Military Science | 2 | Chemistry | (412) 5 | Chemistry | (413) 5 |
| Physical Education | 1 | Military Science | 2 | Military Science | 2 |
| | | Physical Education | 1 | Physical Education | 1 |
| | | Physical Education | (400) 1 | | |

SECOND YEAR

| | | | | | |
|-----------------------|---------|-----------------------|---------|-----------------------|---------|
| Fine Arts | (590) 5 | Fine Arts | (591) 5 | Fine Arts | (592) 5 |
| Fine Arts | (421) 5 | Fine Arts | (428) 5 | Fine Arts | (587) 5 |
| Fine Arts | (432) 5 | Fine Arts | (534) 5 | Fine Arts | (461) 5 |
| Military Science | 2 | Ceramic Engineering | (401) 4 | Fine Arts | (407) 2 |
| Physical Edu. (Women) | 1 | Military Science | 2 | Military Science | 2 |
| | | Physical Edu. (Women) | 1 | Physical Edu. (Women) | 1 |

THIRD YEAR

| | | | | | |
|---------------|---------|---------------|---------|---------------------|---------|
| Fine Arts | (598) 5 | Fine Arts | (594) 5 | Fine Arts | (595) 5 |
| Engr. Drawing | (401) 4 | Fine Arts | (602) 5 | Ceramic Engineering | (605) 4 |
| Fine Arts | (501) 5 | Fine Arts | (662) 3 | Fine Arts | (663) 5 |
| Fine Arts | (408) 3 | Engr. Drawing | (402) 4 | Fine Arts | (503) 5 |

FOURTH YEAR

| | | | | | |
|-----------|---------|-----------|---------|-----------|---------|
| Fine Arts | (701) 3 | Fine Arts | (702) 5 | Fine Arts | (703) 5 |
| Fine Arts | (562) 5 | Fine Arts | (662) 5 | Fine Arts | (663) 5 |
| Fine Arts | (661) 5 | *Elective | 3 | *Elective | 3 |
| *Elective | 5 | | | | |

* Of the above electives at least ten hours must be taken in some other field than that of Fine Arts. The following are suggested fields for the electives: English, geology, psychology, commerce, or engineering.

NOTE: Students pursuing the curriculum in Ceramic Art must secure the approval of the departmental adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by his signature on the Adviser's Approval Card (Form 4676).

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of two hundred and ten Quarter-credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Fine Arts.

OCCUPATIONAL THERAPY

The curriculum in Occupational Therapy at the Ohio State University meets the standards of the Council on Medical Education and Hospitals of the American Medical Association and has been fully approved by that organization. Upon completion of the course the student is eligible to write the national examinations for admission to the Registrar of Occupational Therapists as maintained by the American Occupational Therapy Association.

ADMISSION

Application should be made to the University Examiner's Office for admission to the University and to the Department of Occupational Therapy, College of Education, 105 Arps Hall for admission to this curriculum.

Candidates for admission must arrange for a personal interview with the chairman of the Department of Occupational Therapy. It will be necessary for an applicant to spend at least one day on campus to fulfill admission requirements. Applications for the Autumn Quarter must be complete before August first.

Good health is essential and the candidate must possess personal qualifications and aptitudes for the profession. The maximum age for admission is 35, although exceptions may be made in the cases of persons who are particularly well qualified.

Since occupational therapy is a specialized field and since the number of students who can be accommodated in the training program is limited, admission will be granted to those applicants who are best qualified.

APPROVAL OF PROGRAM

Students pursuing the curriculum in Occupational Therapy must secure the approval of the chairman of the Department of Occupational Therapy on each Quarter's schedule before presenting the schedule card at the Registrar's Office.

ADVANCED STANDING

Candidates who have had previous work adequately covering the ground of various courses in the curriculum may be admitted to advanced standing materially shortening the training period. Transcripts of such work from other colleges or universities should be submitted to the University Examiner for evaluation. The length of time required for such students to complete the program is thus dependent on the amount of transfer credit acceptable as equivalent to or in lieu of regular curriculum requirements. It should be noted that eighteen hours of free electives not directly related to the field of occupational therapy are acceptable in this program.

REQUIREMENTS FOR CLINICAL TRAINING

An average point-hour ratio of 2.25 on all professional courses is required for admission to clinical training (Occupational Therapy 520). Professional courses include Education Survey 407, Fine Arts 534, 572, 573, Anatomy 504, Physiology 407, Physical Education 570, Bacteriology 509, Nursing 410, 425, 549, Education 585, Psychology 407, 609, 695, 541, 690. Social Administration 618, 647, all Occupational Therapy courses. A grade of "C" or better in Occupational Therapy 520 is required each period.

OCCUPATIONAL THERAPY CURRICULUM

| First Quarter | | Second Quarter | | Third Quarter | |
|--------------------|----------------|--------------------|---------|--------------------|---------|
| *Education Survey | (407) 5 | Psychology | (401) 5 | Psychology | (407) 5 |
| Fine Arts | (421) 5 | **English | (401) 5 | Electives | 10 |
| Chemistry | (407 or 411) 5 | **Zoology | (401) 5 | Military Science | 2 |
| Military Science | 2 | Military Science | 2 | Physical Education | (400) 1 |
| Physical Education | 1 | Physical Education | 1 | Physical Education | 1 |

* Occupational Therapy students will comprise a separate section of Education Survey 407 and care should be taken to schedule it at the hour set for this section. See Time Schedule.

** It is highly desirable that Zoology (402) follow Zoology (401) and English (430) follow English (401) as electives in the third Quarter.

| Fourth Quarter | | Fifth Quarter | | Sixth Quarter | |
|------------------------|---------|----------------------|---------|----------------------|---------|
| Anatomy | (504) 5 | Physiology | (407) 4 | Physical Education | (570) 3 |
| Fine Arts | (431) 5 | Fine Arts | (572) 3 | Fine Arts | (573) 5 |
| *Sociology | (410) 5 | Fine Arts | (534) 5 | *Sociology | (505) 5 |
| **Occupational Therapy | (500) 1 | Occupational Therapy | (501) 1 | Occupational Therapy | (501) 1 |
| Military Science | 2 | Military Science | 2 | †Home Economics | (514) 3 |
| Physical Education | 2 | Physical Education | 2 | Military Science | 2 |
| (Women) | 1 | (Women) | 1 | Physical Education | 2 |
| | | ***Electives | 3 | (Women) | 1 |

* The Sociology sequence may be either Sociology 401-402, 401-407, or 410-505.

** Occupational Therapy 500 is required only of transfer students or others who have not been a part of the Occupational Therapy section in Survey 407.

*** It is recommended that Education 505, Field Service be elected in the fifth, sixth or seventh Quarters. This offers the student opportunity for experience in group leadership in a choice of several city agencies. Other electives may include courses in appreciation of art or music, choral or instrumental music, ceramics, criminology, dramatics and speech, education, floriculture, landscape design, library methods, news writing, nutrition, physical education beyond regular requirements, and psychology. Fourteen of the thirty Quarter hours of electives provided for in this curriculum should be directly related to the field of Occupational Therapy and chosen in consultation with the head of the department. The remaining eighteen hours are free electives.

† Requirement for women students.

| Seventh Quarter | | Eighth Quarter | | Ninth Quarter | |
|-----------------------|---------|-----------------------|---------|----------------------|---------|
| Bacteriology | (509) 5 | Education | (585) 4 | Education | (585) 4 |
| Occupational Therapy | (501) 1 | Psychology | (541) 3 | Occupational Therapy | (510) 2 |
| Nursing | (549) 1 | Social Administration | (647) 3 | Nursing | (410) 3 |
| Psychology | (609) 3 | Occupational Therapy | (510) 2 | Nursing | (425) 3 |
| Social Administration | (618) 4 | Electives | 6 | Psychology | (690) 3 |
| *Home Economics | (507) 2 | | | Electives | 3 |
| Electives | 2 | | | | |

**Tenth Quarter

| | |
|---|---------|
| Occupational Therapy | (520) 6 |
| Clinical training in Occupational Therapy | |

*Requirement for women.

**The prerequisite for admission to Occupational Therapy 520 is an average point-hour ratio of 2.25 in all required professional courses. The student spends this Quarter gaining practical experience and instruction under direction of the University Department of Occupational Therapy and the immediate supervision of registered therapists in affiliated hospitals. Students attend hospital lectures, conferences and clinics during this period.

| Eleventh Quarter | | *Twelfth Quarter | | *Thirteenth Quarter | |
|----------------------|---------|----------------------|---------|----------------------|---------|
| Education | (585) 4 | Occupational Therapy | (520) 6 | Occupational Therapy | (520) 6 |
| Occupational Therapy | (510) 2 | Clinical Training | | Clinical Training | |
| Psychology | (695) 3 | Occupational Therapy | | Occupational Therapy | |
| Electives | 3 | | | | |

*These two Quarters are spent in completion of the required three Quarters of clinical training. During this training period the students will move from one affiliated hospital to the next so that experience of each will include general, children's hospital or service, orthopedic hospital or service, tuberculosis sanatorium or service and psychiatric hospital or service.

REQUIREMENTS FOR A DEGREE

Upon the satisfactory completion of one hundred and ninety Quarter credit hours, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Occupational Therapy.

COMBINATION CURRICULA

ARTS-EDUCATION

Four and One-Quarter Years

Because the College of Arts and Sciences and the College of Education have a considerable amount of required work in common, a planned program makes it possible to receive both the Bachelor of Arts degree and some degree offered by the College of Education in a minimum period of thirteen Quarters.

The student should register in *both colleges* as soon as he decides to become a candidate for two degrees—preferably during his freshman year, certainly not later than the beginning of his senior year. A tardy decision will usually prolong the time necessary to complete the work. The student's program of study each Quarter must be approved by the Secretaries of both colleges.

To be eligible for the two degrees, the candidate must meet all the specific requirements of the two colleges for the degrees desired, and must secure credit for 30 hours beyond the total hours required in either of the two curricula, with a cumulative point-hour ratio of 1.8 on all work undertaken. The total required in the College of Arts and Sciences is 190 hours; the total required in the College of Education will depend upon the curriculum chosen. In any case, the student must secure credit for at least 160 hours in courses listed in the Bulletin of the College of Arts and Sciences, and must complete the program in his fields of specialization and in the professional group of

requirements of the College of Education with an average point-hour ratio of 1.8. Any deficiency in points on the professional work must be made up by taking additional courses designated by the College of Education.

The student's program can usually be planned so that the two degrees may be conferred simultaneously. However, if preferred, the program may be planned so that the degrees will be conferred at different Convocations.

A student who has completed the course in supervised teaching will not be recommended for the degree of Bachelor of Arts until he has met all requirements for the degree of Bachelor of Science in Education.

Students transferring with advanced credit from other institutions must obtain credit, through residence in the Ohio State University, or at least 45 hours and 90 points in courses listed in the Bulletin of the College of Arts and Sciences, and also 45 hours and 90 points in courses listed in the Bulletin of the College of Education.

COMMERCE-EDUCATION

A candidate who has completed all of the requirements of the College of Commerce and Administration in the curriculum in General Business or Accounting, leading to the degree, Bachelor of Science in Business Administration, who has completed all of the requirements of the College of Education in a related curriculum in business education leading to the degree, Bachelor of Science in Education, and who has received credit for two hundred forty-one Quarter-hours, including military science, physical education, and hygiene, will be recommended for the two degrees. A student pursuing any other curriculum in the College of Commerce and Administration may likewise become eligible for the two degrees provided his program in the Education teaching fields is approved by the Executive Committee of the College of Education.

Students pursuing the joint curriculum are advised to register in both colleges not later than the beginning of the junior year, if possible. In every case the candidate shall have met all the requirements of the University relating to residence in the colleges conferring the degrees.

INSTRUCTION FOR RADIO BROADCASTING

The University provides courses both for students interested in securing training for service in the radio industry and for those who wish to become informed about the radio field. Since these courses are given in a number of different departments they are listed together for convenience.

There is no department of radio or straight radio curriculum as such in the University. Those who plan careers in radio should choose the field in radio in which they wish to specialize. The orientation course, Arts Survey 405, Introduction to Radio, will be helpful as a basis for choosing the particular field of specialty.

Musicians who look forward to careers in radio should enroll in the School of Music pointing toward the Bachelor of Music degree with a major in radio. Students planning careers as journalists in the radio news field should take the Journalism-Radio curriculum in the School of Journalism. Students wishing to specialize in the business aspects of the radio industry should enroll in the College of Commerce. Students who wish to specialize in the speech aspects of radio, announcing, acting, and production, should follow the curriculum for the Radio-Speech major in the College of Arts and Sciences.

Students who do not plan careers in radio, but wish to be better informed about this significant medium of communication may elect radio courses in the various departments (provided the prerequisites are met) or they may choose the Radio-Journalism major or the Radio-Music major in the College of Arts and Sciences.

Prospective students should consult advisers in the appropriate departments and the Director of Radio Education.

The description of the courses will be found also under the departments indicated in the appropriate college bulletins.

GENERAL AND BASIC

- Arts Survey 405. Introduction to Radio
- Speech 560. Radio Speech
- Speech 562. The Radio Talk
- Business Organization 520. Radio Station Management
- Music 555. Music in Broadcasting

FOR ADVANCED UNDERGRADUATES AND GRADUATES

- Education 601. Radio in Education
- Journalism 605. Writing Radio News
- Journalism 606. Advanced Radio News Writing
- Journalism 607. Radio News Features
- Journalism 614. Law of the Press and Radio
- Journalism 623. Comparative Journalism and Radio
- Business Organization 718. Radio Advertising

SUPERVISED EXPERIENCE AND SPECIAL PROBLEMS

- Electrical Engineering 655. Radio Broadcasting Problems
- Education 600. Minor Problems
- Journalism 609-610-611. Advanced Laboratory Practice
- Journalism 625. Journalism Practice
- Speech 700. Minor Problems in Speech
- Education 800. Seminar in Education
- Journalism 802-803-804. Seminar in Journalism

DEPARTMENTS OF INSTRUCTION

COURSES OF GENERAL INTEREST

EDUCATION SURVEY COURSES

Of the following courses, 407 is required of all beginning Freshmen and 501 of all transfer students in their first Quarter in the College of Education. The remaining courses are especially recommended to Juniors and Seniors as electives.

407. Introductory Survey in Education. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Lectures, discussions, conferences, field trips, observations, movies and recordings, student analysis. Required of beginning Freshmen in the College of Education during their first Quarter of residence. Junior Dean and staff members of the College of Education under the administration of the Education Survey 407 Executive Committee.

This course is designed to aid students in planning all phases of their University life. The planning process includes an exploration of societal demands and occupational opportunities, with particular emphasis on the functions of education in a democracy; an inventory of personal and community resources; and a critical evaluation of student purposes and plans.

501. Introductory Survey in Education. Two credit hours. One Quarter. Autumn, Winter, Spring. Two class meetings each week. Lectures, readings, discussions, conferences with faculty advisers, observations, student analysis. Required in the first Quarter of enrollment in the College of Education, of transfer students from other colleges of this University or from other institutions. Mr. Bennett and members of the staff of the College of Education under the administration of the Education Survey 501 Executive Committee.

This course is adapted to the needs of students who enter the College of Education with advanced standing and is designed to aid them in planning all phases of their College and University life. It includes an exploration of societal demands and occupational opportunities for teachers and other educational workers, with particular emphasis on the functions of education in a democracy; an inventory of personal resources and interests in terms of factors of competency in teaching; and a critical evaluation of student purposes and plans.

Not open to students who have credit for Education Survey 407 or 407a.

502. General Aviation Survey. Five credit hours. Autumn Quarter. Lectures, discussions, laboratory work, demonstrations, field trips. Prerequisite, high school algebra and geometry or the equivalent. Mr. Cahoon, Mr. Fawcett.

Topics will include elementary aerodynamics, meteorology, navigation, civil air regulations, implications for community, national, and international relations.

ARTS SURVEY COURSES

405. Introduction to Radio. Two credit hours. One Quarter. Autumn, Winter, Spring. Two class meetings and one laboratory period each week. Required of undergraduate students as prerequisite for all radio courses in Speech, Music, Education, Journalism, Business Organization or for Electrical Engineering 655.

An introduction to the whole field of non-engineering radio; history, structure, regulation and support of broadcasting; organization and function of the individual station; fields of specialization, their potentialities and limitations; public responsibilities of radio as mass communication; the radio listener. Lectures, discussion, observation and individual problems.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

605. Foundations of Contemporary Civilization. Five credit hours. One Quarter. Autumn, Winter, Spring. Five meetings each week. Mr. Evans, Mr. Vivas, Mr. Chandler.

This course is designed for all students majoring in subjects falling within the fields of biological and inorganic sciences, mathematics, and psychology. It is elective to other students also. The course deals with the changes of thought in religion, ethics, social and political philosophy in relation to the general intellectual and social changes of modern civilization. It concludes with a brief discussion of the chief problems of our present civilization.

608. Development of Modern Science. Five credit hours. One Quarter. Autumn and Winter. Five meetings each week. Mr. Spieker, Mr. Wells.

This course is designed especially for students who have not majored in science. Its purpose is to give the non-science student a general view of the historical development of scientific ideas, and to dwell upon the nature and validity of scientific hypotheses and theories from a scientific point of view. The course is also well adapted to assist the prospective teacher of science in greatly broadening his scientific foundations.

ACCOUNTING

Office, 305 Hagerty Hall

PROFESSORS MILLER, TAYLOR, ECKELBERRY, WILLCOX AND DICKERSON, ASSOCIATE PROFESSOR HECKERT, ASSISTANT PROFESSORS SHONTING, BURNHAM, JENCKS, FLEIG, AND MCCOY, MR. BOLON, MR. WALL, MR. COX, MRS. ALLEN, MR. KONKLE AND ASSISTANTS

401-402. Elements of Accounting. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. Three class meetings and two two-hour laboratory periods each week. Prerequisite or concurrent, Economics 401-402 or 403-404. All instructors.

The work of the first Quarter includes the development of the basic principles underlying bookkeeping procedures; discussion of the techniques and records employed in the recording, classification and summarization of simple business transactions; a treatment of the methods involved in closing the accounting records, including the accountant's work sheet, and preparation of the financial statements; and an introduction to the analysis and interpretation of these statements.

The work of the second Quarter develops the application of the above principles and techniques to the partnership and corporate forms of organization. Manufacturing statements, the voucher system, and problems arising in connection with accounting for cash and commercial paper.

403. Intermediate Accounting. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Accounting 401-402. Mr. Eckelberry, Mr. Miller, Mr. Dickerson, Mr. Heckert, Mr. Willcox, Mr. Burnham, Mr. Jencks, Mr. Fleig, Mr. McCoy, Mr. Cox, Mr. Konkle.

A study of the fundamental accounting principles of valuation and their implications in the preparation of the Balance Sheet and the Income Statement. Special consideration is given to problems in connection with cash, receivables, inventories, investments, fixed assets, liabilities, capital stock and surplus.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

602. Advanced Principles of Accounting. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Accounting 403. Mr. Eckelberry, Mr. Miller, Mr. Burnham.

A study of the application of basic principles to the accounting problems arising in connection with consignment sales, installment sales, branch house operations, mergers and reorganizations, statements for holding companies and their subsidiaries, the dissolution of business units, and fiduciary operations.

Not available for graduate credit for students majoring in Accounting.

603-604. Cost Accounting. Five credit hours. Two Quarters. Five class meetings each week. Prerequisite, Accounting 403. Not open to students who are taking Accounting 624. Mr. Willcox, Mr. Heckert.

The work of the first Quarter consists of a discussion of the fundamental principles of cost determination. Emphasis is placed on the use of cost information in the control of manufacturing activities and the relationships between costs, selling prices and profits. Accounting for material cost, labor cost and manufacturing expense is discussed in detail.

In the second Quarter a study is made of the cost accounting principles arising in connection with process costs, by-product costs, joint costs, standard costs, and distribution costs.

Not available for graduate credit for students majoring in Accounting.

616. Financial Statement Analysis. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Accounting 403. Mr. Bolon, Mr. Jencks.

A study of the flow or movement of funds as reflected in the financial statements. The use

of ratios and other indices in the analysis and interpretation of the financial position, together with the trends and variations therein, are considered in detail. The subject matter is developed through lectures and problems supplemented with published financial statements. Each student prepares, under supervision of the instructor, an analysis of the current financial statements of some prominent corporation, together with a comparison with the principal competitors in the field.

ADULT EDUCATION

(See Bureau of Special and Adult Education)

AGRICULTURAL CHEMISTRY

Office, 211 Townshend Hall

PROFESSORS LYMAN, ALMY, AND BURRELL, ASSISTANT PROFESSOR DEATHERAGE

401. General Agricultural Chemistry. Five credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and two three-hour laboratory periods each week. Prerequisite, Chemistry 412. Mr. Almy, Mr. Burrell, Mr. Lyman, Mr. Deatherage.

An introductory course in organic chemistry and its application to plant and animal life. The laboratory includes both organic and quantitative work.

403. An Introduction to Organic and Biological Chemistry. Five credit hours. Autumn Quarter. Three lectures or recitations and two three-hour laboratory periods each week. Prerequisite, Agricultural Chemistry 401. Mr. Lyman.

The chemistry and analysis of typical foodstuffs. The chemistry of digestion. Digestibility and efficiency of proteins. Fuel value determination and gaseous metabolism. Metabolism of proteins. Carbohydrates and fats. Vitamins.

AMERICAN HISTORY

(See History)

ANATOMY

Office, 410 Hamilton Hall

PROFESSORS KNOUFF AND EDWARDS, ASSOCIATE PROFESSORS SETTERFIELD AND OSBORN, MR. PHELPS

504. Elementary Anatomy. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures and six laboratory hours each week. Prerequisite, Zoology 401 or equivalent. Zoology 402 is recommended. Required of students in Optometry, Occupational Therapy, Medical Technology, Dental Hygiene, Nursing, and majors in Physical Education. Others may elect with consent of the instructor. Not open to pre-medical or pre-dental students. Mr. Phelps.

A course dealing with the fundamental principles of anatomy as illustrated by the dissection of the organ-systems of the cat supplemented by frequent demonstrations of human material.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

613. Comparative Anatomy of the Vertebrates. Five credit hours. Autumn Quarter. Two lectures or recitations and two three-hour laboratory periods each week. Prerequisite, Zoology 401-402. Mr. Setterfield.

The comparative anatomy of the Elasmobranchs, Amphibians and mammals as illustrated by the shark, frog, and fetal pig.

616. Comparative Vertebrate Embryology. Five credit hours. Spring Quarter. Three lectures or recitations and two three-hour laboratory periods each week. Prerequisite, Anatomy 619 or its equivalent. Mr. Knouff, Mr. Osborn.

The development of the chick and pig with special emphasis on fetal membrane formation and organogenesis.

619. Comparative Anatomy of the Vertebrates. Five credit hours. Winter Quarter. Two lectures or recitations and six laboratory hours each week. Prerequisite, Anatomy 613 or equivalent. Mr. Setterfield.
The anatomy of the mammals with special reference to the cat.

ARCHITECTURE AND LANDSCAPE ARCHITECTURE

Office, 119 Brown Hall

PROFESSORS RONAN, CHUBB, BAUMER, AND SMITH, ASSOCIATE PROFESSORS
FISCHER, SUTTON, AND R. K. THOMPSON

ARCHITECTURE

401. Shades and Shadows. Three credit hours. Autumn Quarter. One recitation and six laboratory hours each week. Prerequisite or concurrent, Engineering Drawing 403 or 413 and concurrent with Architecture 421. Mr. Chubb.
Lectures and practice on casting shades and shadows as elements of design. Practice in wash rendering.

421. Introduction to Architectural Design. Five credit hours. Autumn Quarter. Two lectures and nine laboratory hours each week. Prerequisite, Engineering Drawing 412. Mr. Fischer.

Lectures and experiments on the organization of space and its relation to structure, utility and materials. Experiments in three-dimensional form studied by means of models and perspective presentations.

422. Elementary Architectural Design. Five credit hours. One Quarter. Autumn, Winter, Spring. Twelve laboratory hours each week. Prerequisite, Architecture 401 and 421. All instructors.

Simple problems in plan, elevation, and section. Individual criticism and library research.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

666. An Introduction to Town and Regional Planning. Two credit hours. Winter Quarter. Two class periods for lecture and discussion each week. Elective for all students of the University of third and fourth year standing. Mr. Sutton.

An introductory and non-technical study of the physical elements of the town or city and its environs, and of the social, economic and civic implications involved. Past and contemporary practice. Problems of rehabilitation, replanning and expansion. The objective of the course is to awaken in the university student a consciousness of the vital part he may play as a citizen in the planning of his community. Members of the University faculty and lecturers of special experience and skill will be invited to assist in the presentation of the subject.

LANDSCAPE ARCHITECTURE

500. Appreciation of Landscape Design. Two credit hours. Autumn Quarter. Two lectures each week. Open to any student not majoring in Landscape Architecture. No prerequisite. Mr. Sutton.

A survey course that is arranged especially for those who wish to gain a better understanding and appreciation of design as applied to out-of-door areas.

542. History of Landscape Architecture. Three credit hours. Autumn Quarter. Three lectures each week. Mr. Sutton.

An historical study of landscape design for professional and non-professional students. The course covers the development of landscape design in the Mediterranean Countries through the period of the Italian Renaissance. Illustrated lectures, class discussions, collateral reading, and a report.

ART

(See Fine Arts)

ASTRONOMY

(See Physics and Astronomy)

BACTERIOLOGY

Office, 210 Pharmacy and Bacteriology Building

PROFESSORS STARIN, MORREY (EMERITUS), BIRKELAND, STAHLY AND HUDSON,
ASSISTANT PROFESSORS DODD, FERGUSON AND WEISER, MISS HEISE AND
ASSISTANTS

509. Microbiology in Relation to Man. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class periods each week. Prerequisite, ten hours of natural science. Mr. Birkeland and assistants.

A general course designed to acquaint the student with and give him a better understanding of the various activities of microorganisms which have a bearing on the physical and economic well-being of man. It deals with the nature of bacteria and their relationship to food preparation and preservation, soil fertility, sanitation, public health, and diseases of man, animals, and plants.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores; they are open to advanced undergraduate and graduate students only. Prerequisite, fifteen hours of chemistry and ten hours of a biological science.

Bacteriology 607 is a prerequisite to all elective "600" courses in the department and is designed to prepare for special work.

607. General Bacteriology. Five credit hours. One Quarter. Autumn and Spring. Three class periods and three two-hour laboratory periods each week. Mr. Stahly, Mr. Weiser, and assistants.

This course is a prerequisite to all elective courses in the department. The lectures consider the morphology, physiology, and classification of bacteria as well as some of their applications to everyday processes. The laboratory work provides experience in preparing media and in staining, observing, culturing, isolating, and identifying microorganisms.

Not open for graduate credit to students majoring in bacteriology.

608. Introduction to Pathogenic Bacteriology. Three credit hours. One Quarter. Winter and Spring. Three class periods each week. Prerequisite, Bacteriology 607. Mr. Birkeland.

A general course designed to acquaint students with those bacteria causing disease in man; their habitats and modes of transmission, and an elementary consideration of the immunological processes involved. Designed primarily for students who desire a general knowledge of the field and not for students majoring in bacteriology.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

BOTANY

Office, 102 Botany and Zoology Building

PROFESSORS MEYER, TRANSEAU (EMERITUS) STOVER, SAMPSON, BLAYDES, AND ALLISON, ASSOCIATE PROFESSORS WALLER AND TAFT, ASSISTANT PROFESSORS LAMPE, WOLFE, SWANSON AND POPHAM, MR. HUMPHREY, MR. JONES, MR. NORRIS, AND ASSISTANTS

401. General Botany. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitation periods each week. Staff and assistants.

Plants as living organisms and as constituting a variously interrelated part of man's environment. Basic processes and structures in green plants; their relations to factors in the environment, to the development of the various organs of a plant, to plant behavior, to the existence of non-green plants and animals, and to the special energy and material needs of man. Frequent comparison of processes in plants with those in man. A continuing acquirement and application of scientific procedures through observations and discussions. No lectures.

402. General Botany. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitation periods each week. Prerequisite, Botany 401. Staff and assistants.

A continuation of Botany 401 enriched by an ever broadening background of processes and interrelations. Reproduction in plants, the basic processes in heredity, heritable and non-heritable

variations in plants (their causes, manner of occurrence, consequences, and the advantages man takes of them), the biological and economic relations of non-green plants, the various types of plants, the vegetation of a continent, plants in relation to conservation.

406. Local Flora. Five credit hours. One Quarter. Autumn and Spring. Two lectures and six hours laboratory and field work each week. Prerequisite, Botany 401-402. Mr. Wolfe, Mr. Humphrey.

A laboratory, field and lecture course devoted to classifying seed plants common in Ohio; also certain algae, mosses, fungi and ferns. Field characteristics and identification in the field are emphasized, as well as the use of manuals and keys. Several off-campus Saturday field trips are included.

419. General Plant Pathology. Five credit hours. One Quarter. Autumn, Winter, Spring. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 401-402. Mr. Stover, Mr. Allison.

An introduction to the diseases of cultivated plants. The nature, importance, causes, symptoms, classification, and control of plant diseases; the life histories of pathogenic organisms, and effects of the environment, cultural practices, and heredity of the host plants upon the prevalence of diseases.

Not open to students who have credit for Botany 422.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Plant Ecology. Five credit hours. Autumn Quarter. Three lectures and one three-hour laboratory period each week. Prerequisite, Botany 401-402 and two additional Quarters of biology. Mr. Wolfe.

Patterns of vegetation, local, regional and continental; and the historic, climatic, soil, and plant factors that limit the various plant communities. Lectures, discussions, and laboratory work, on tundra, boreal forest, hemlock-hardwood, and deciduous forest. Field study of Ohio plant communities and their successions. Several extended Saturday field trips.

602. Plant Ecology. Five credit hours. Spring Quarter. Three lectures and one three-hour laboratory period each week. Prerequisite, Botany 601. Mr. Wolfe.

Continuation of Botany 601. The forest, grassland, and desert vegetation of western North America. Lectures, reference reading and laboratory work. Further study of Ohio plant communities. Several extended Saturday field trips.

605. Plant Physiology. Five credit hours. One Quarter. Autumn and Winter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 401-402 and two Quarters of chemistry. Mr. Meyer, Mr. Swanson.

A fundamental course in plant physiology: solutions, colloidal systems, cell physiology, diffusion phenomena, osmotic quantities, permeability, transpiration, absorption and movement of water, photosynthesis.

606. Plant Physiology. Five credit hours. One Quarter. Winter and Spring. Three lectures and two two-hour laboratory periods each week. Prerequisite, Botany 605. Mr. Meyer, Mr. Swanson.

Continuation of Botany 605: photosynthesis, synthesis of carbohydrates, fats, and nitrogenous compounds, absorption and utilization of mineral salts, digestion, translocation of solutes, respiration, growth, reproduction, dormancy.

611. Evolution of Plants. Three credit hours. Spring Quarter. Lectures and assigned readings. Prerequisite, Botany 401-402 and two additional Quarters of botany. Miss Lampe.

The fossil record of plants of the past, followed by a study of trends in the differentiation of plants as shown by variations in form, structure, physiology, and chemical constitution. The cellular basis of heredity, stability, and variation. The effects of environments and circumstances on survival.

613. General Morphology of Thallophytes and Bryophytes. Five credit hours. Autumn Quarter. Four two-hour laboratory periods each week. Prerequisite, Botany 401-402. Mr. Blaydes.

A study of the life cycles of bacteria, algae, fungi, liverworts and mosses. Comparative and experimental studies using numerous species of the several groups for demonstrating the reproductive processes and tracing evolutionary developments.

614. General Morphology of the Pteridophytes and Spermatophytes. Five credit hours. Winter Quarter. Four two-hour laboratory periods each week. Prerequisite, Botany 401-402. Miss Lampe.

A study of the comparative structures and life histories of the ferns, gymnosperms, and angiosperms, giving particular attention to the structure and development of seed plants.

615. Plant Microtechnic. Five credit hours. Winter Quarter. Two lectures and three two-hour laboratory periods each week. Prerequisite, Botany 401-402 and two additional Quarters of biology. Mr. Blaydes.

Principles and methods of fixing, imbedding, sectioning and staining of plant tissues for permanent microscopic preparations. Opportunity is given for preparing a collection of microscope slides suitable for use in teaching. Students having research materials may use these in making microscopic preparations.

619. Economic Botany. Five credit hours. Autumn Quarter. Four lectures and one two-hour laboratory period each week. Prerequisite, Botany 401-402 and one additional year of biological work. Desirable concurrently or as prerequisite, ecology or advanced geography. Consult instructor before registering. Mr. Waller.

The plant sources of sugars, fats, proteins, fibers, rubber, and wood products. Related problems of production and distribution are illustrated and discussed. Field trips to distributing centers are scheduled when possible.

635. Plant Genetics. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Botany 401-402, and one additional Quarter of biological science. Mr. Waller.

Variations in plants; their inheritance. Application of inheritance studies to practical problems of plant breeding.

***637. Plant Cytology.** Three credit hours. Spring Quarter. Three two-hour laboratory periods each week. Prerequisite, four Quarters of biology. Given biennially, alternating with Botany 640. Miss Lampe.

The colloidal nature and chemistry of cell organs in living and fixed condition. Effect of various chemicals upon protoplasmic structure. Ontogeny, structure, divisions and fusions of plant cells. Chromosome structure and behavior; chromosome and gene mutations.

640. Plant Anatomy. Three credit hours. Spring Quarter. Three two-hour laboratory periods each week. Prerequisite, Botany 401-402 and two additional Quarters of biology. Given biennially, alternating with Botany 637. Mr. Popham.

The initiation, differentiation and development of tissues, tissue systems and organs of vascular plants, and a comparative study of the various structures. This course is a desirable antecedent to advanced work in plant physiology, pathology and morphology.

701. Special Problems: Taxonomy, Morphology, Physiology, Cytology, Plant Pathology, Ecology, Genetics, and Anatomy. Three to fifteen credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, Botany 401-402 and two additional Quarters of some biological subject. The staff.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 683.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

*Not given in 1947-1948.

BUREAU OF EDUCATIONAL RESEARCH

Office, 200, 201 Arps Hall

PROFESSORS HOLY, CHARTERS (EMERITUS), DALE, ECKELBERRY, MOONEY, RATHS, TYLER AND WOELFEL, ASSOCIATE PROFESSOR FLESHER, ASSISTANT PROFESSOR MacLATCHIEY, INSTRUCTORS GIBBONY, NICHOLAS, TYLER, WHITEHEAD, AND WILLIAMS, MISS SEEGER, MRS. EWAN, RESEARCH ASSOCIATES, AND ASSISTANTS

The major purpose of the Bureau of Educational Research which was organized in 1921 is to promote the scientific investigation of educational problems in the College, in the University, and in the public schools of the State. To facilitate its work, an important step was taken in the Autumn of 1942. That step was the action of the Board of Trustees on October 11, 1942, which authorizes the President of the University to assign staff members from other departments in the University to the Bureau for full-time or part-time services to carry on approved investigations.

Library. The research library contains large quantities of material in the form of manuscripts, pamphlets, bulletins, reports, modern textbooks for elementary and high-school grades, and educational periodicals. This library is in charge of a reference librarian, and her services, together with the library material, are utilized in the preparation of bibliographies and reports on problems presented by those engaged in educational work.

Courses. In order to make the resources of the Bureau serve for research purposes, students desiring to work in the Bureau may register in certain courses listed in the Departments of Education and Psychology. Courses must be approved by the chairman of the department and by the Director of the Bureau. Such students will be under the direction and supervision of the Bureau staff members.

Research Problems. Students taking such courses are given practical problems upon which to work. According to the nature and exacting character of the problem and of the scholastic status of the student, he may be registered in either of two groups of courses, as follows:

MINOR PROBLEMS. Two to four credit hours. Investigation of minor problems.

Education 600

Psychology 650

INDIVIDUAL PROBLEMS: Two to ten credit hours. Investigation of problems leading to preparation of theses for advanced degrees.

Education 950

Psychology 950

NOTE: Description of these courses, prerequisites, and the divisions into which the two Education courses are divided will be found under the department announcements.

BUREAU OF SPECIAL AND ADULT EDUCATION

Office, 321 Arps Hall

PROFESSORS NISONGER AND SANDERSON, ASSOCIATE PROFESSOR ROSEBROOK
ASSISTANT PROFESSOR APPELDOORN AND ASSISTANTS

The function of the Bureau of Special and Adult Education is to promote the education of all types of exceptional children (the handicapped and the gifted) and to further the work of adult education.

Qualified students in training may secure under adequate supervision practical field experience in special or adult education, or in psycho-educational work.

Students interested in the work of this Bureau should confer with the Director.

SPECIAL EDUCATION

Field Service. The objectives of field service are as follows: to assist communities in organizing the work of special education; to serve in an advisory capacity the communities in which special education has already been organized; and to cooperate with state and local organizations in formulating a state program for the protection, treatment, and training of all types of exceptional children and for the removal of the causes that handicap children.

Supervised Experience for Graduate Students. Opportunities are available for supervised field experience for graduate students.

Teacher Training. Only persons who have had successful experience in teaching normal children should prepare to teach exceptional children. A student who wishes to prepare to teach mentally retarded children, behavior problem children, or children defective in speech should select courses from those recommended below.

Candidates for the degree of Bachelor of Science in Education interested in teaching exceptional children should register in the Curriculum in Elementary Education. In this curriculum students are required to elect 20 additional hours in some one selected field, at the junior-senior level. Those interested in special education may meet this requirement by choosing electives from the courses listed below:

All types of exceptional children

- Psychology 609. Exceptional Children: General Survey
- Psychology 613. Mental and Educational Tests
- Psychology 615. Psycho-Educational Diagnosis and Treatment
- Psychology 616. Individual Testing by the Binet-Simon Method
- Psychology 618. Clinical Tests
- Psychology 619. Psychological Clinic
- Psychology 661. Psycho-Educational Problems
- Psychology 669. Gifted Children
- Psychology 688. Psychology of Reading
- Psychology 820. Advanced Psychological Clinics
- Education 764. Supervised Teaching in Special Classes
- Education 800-I. Seminar in Special Education
- Education 820. The Education of Exceptional Children.

Mentally retarded children

- Psychology 611. Mentally Deficient Children
- Psychology 622. Delinquent Children
- Education 458. Wood and Metal Work
- Education 765. Principles and Methods of Teaching the Mentally Retarded

Behavior problem children

- Psychology 622. Delinquent Children
- Psychology 634. Criminal and Legal Psychology
- Psychology 641. Abnormal Psychology
- Education 766. Principles and Methods of Teaching Behavior Problem Children
- Sociology 625. Criminology
- Psychology 671. Principles of Treating the Problem Child

Children defective in speech

- Speech 686. Visual Hearing Techniques
- Speech 698. Clinical Practice in Speech Correction
- Speech 694. Speech Disorders Survey
- Speech 877. Speech Pathology
- Speech 504. Speech Functions and Responsibilities of the Teachers
- Education 675. The Teaching of Speech.

Research. Students interested in research problems connected with the work of the Bureau of Special and Adult Education may register in any of the following courses:

- Psychology 650. Minor Problems
- Psychology 950. Research in Psychology
- Education 600-I. Minor Problems
- Education 950-I. Research in Education
- Speech 700. Minor Problems in Speech
- Speech 950. Research in Speech

ADULT EDUCATION

Field Service. The aims of field service are as follows: to aid in the organization of adult study groups; to assist organized groups in formulating programs of study; to prepare and issue courses of study, bulletins and other materials for the use of adult groups; and to cooperate with state and local organizations in furthering the work of adult education.

University Courses. Students interested in taking work in adult education may enroll in any of the following courses:

- Education 600-I. Minor Problems
- Education 770. Adult Education
- Education 950-I. Research in Education
- Psychology 650. Minor Problems
- Psychology 670. Psychological Problems of Adult Life
- Psychology 679. Psychology of Public Attitudes
- Psychology 950. Research in Psychology
- Agricultural Extension 501. Extension Methods
- Agricultural Extension 600. Extension Education

NOTE: Descriptions of the courses listed above will be found under the department announcements, with the exception of those at the 800 or 900 level which are described in the Graduate School Bulletin only. See College of Agriculture Bulletin for Agricultural Extension 501 and 600.

BUSINESS ORGANIZATION

Office, 107 Hagerty Hall

PROFESSORS MAYNARD, WEIDLER, HOAGLAND, DICE, VAN CLEEF, DUFFUS, BECKMAN, DAVIS, REEDER, SMART, PIKE, DONALDSON, JUCIUS, LEY AND NOLEN, ASSOCIATE PROFESSORS CORDELL, DAMERON, AND BARTELS, ASSISTANT PROFESSORS RIDDLE, MEYER, BROWN AND STALNAKER, MRS. FISHER, MR. LITTLEFIELD, MR. MINER, LECTURERS AND ASSISTANTS

401. Introduction to Business. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lecture, problem, and discussion hours each week. Open only to Freshmen and Sophomores. Mr. Riddle, Mr. Meyer, and others.

This course is designed to introduce students to the field of business. A description of the functions and structure of modern business is presented and cases are introduced which give the student a background of information and help to prepare for advanced courses.

504. Business Communications. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 401-402 and junior standing. Mr. Bartels, Mr. Littlefield, Mrs. Fischer.

Selling, adjusting, collecting, credit extending, etc., by mail. The application of business principles to letters. An historical treatment of claims and complaints.

510. Secretarial Work. Five credit hours. One Quarter. Autumn and Winter. Three class meetings and two laboratory periods each week. Open only to majors in the Curriculum in Secretarial Service and Business Education. Prerequisite, Education 403 and 406. Mrs. Fisher.

The theory and practice of secretarial fundamentals; procedures and techniques of secretarial work; duties and responsibilities of the secretary with respect to business letters, forms and reports; secretarial ethics.

516. Fundamentals of Office Management. Three credit hours. One Quarter. Winter and Spring. Three class meetings each week. Open only to majors in the Curriculum in Secretarial Service and Business Education. Prerequisite or concurrent, Economics 402 and Accounting 402. Mr. Jucius, Mrs. Fisher.

Supervisory problems of the office; fundamentals of office organization and management; office location and layout; design and control of office procedures; personnel functions.

520. Radio Station Management. Three credit hours. One Quarter. Autumn and Spring. Three class meetings each week. Prerequisite, Business Organization 401 and Economics 402 or 405 and junior standing. Mr. Dameron.

Problems and procedures in the business management of radio stations. Station organiza-

tion. Physical layout. Production department; programs, announcing, continuity, public relations. Sales department. Personnel. Station accounting. Small station problems. Legal requirements and limitations. Industry relations. New developments.

551. Personal Finance. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 402, 404, or 406. Mr. Donaldson.

A course in finance from the viewpoint of the individual. Deals with the principles and practices involved in buying on credit, borrowing money, saving money, bank relationships, buying government bonds, insurance, annuities, real estate, corporate bonds and stocks, and problems of taxation and wills.

Not open to students who have credit for or who are taking Business Organization 655.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

620. Public Aspects of Industry. One credit hour. Winter Quarter. Mr. Weidler.

621. Business Law: Contracts. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Economics 401-402. Mr. Ley, Mr. Pike.

A course in the law of contracts for the student of business, including the study of the fundamentals of legally binding agreements between persons, and their enforcement.

623. Business Law: Agency, Sales, Property. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Business Organization 621. Mr. Pike, Mr. Ley.

A study of selected, fundamental principles in the subjects named, deemed important to the student of business.

Not available for graduate credit for students majoring in Business Organization or Accounting.

625. Business Law: Negotiable Instruments. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Business Organization 621. Mr. Donaldson.

A course in the laws governing bills of exchange, promissory notes and checks designed to guide the business man in his daily transactions with such instruments.

627. Business Law: Partnerships and Corporations. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Business Organization 621. Mr. Pike.

A course designed to give the student of business a practical working knowledge of important laws governing the formation and operation of partnerships and corporations.

640. Corporate Organization and Control. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 402. Mr. Donaldson.

Types of business enterprise; the corporation; rights, duties, obligations and liabilities of stockholders, directors, and officers.

650. Corporation Finance. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Economics 402 and Accounting 402 or 405. Mr. Duffus, Mr. Donaldson, Mr. Riddle, Mr. Hoagland.

Financial structure and problems of modern business corporations.

Not open to students who have credit for or are taking Economics 616.

684. Industrial Management Field Work. Three to six credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Business Organization 680, a 2.5 point average, and permission of the instructor. Mr. Davis, Mr. Jucius, Mr. Stalnaker.

The student is expected to obtain full-time employment with an approved industrial concern. He is required to investigate and report on certain management problems of the concern. The requirements of the course can not be met while in residence at the University. The course offers an opportunity to observe the application of management principles under actual operating conditions.

685. Purchasing, Stores, and Inventory Control. Three credit hours. One Quarter. Autumn and Spring. Three class meetings each week. Prerequisite, Business Organization 680. Mr. Davis, Mr. Jucius.

An examination of the objectives, principles, and methods that enter into the work of managing the functions of supply in industry. Considers various problems including those relating to the planning of materials requirements, purchasing, receiving, storing and disbursing.

686. Personnel Organization and Management. Three credit hours. One Quarter. Autumn and Spring. Three class meetings each week. Prerequisite, Business Organization 680. Mr. Jucius, Mr. Davis.

An examination of the staff work required in planning, organizing, and controlling the personnel functions in the business organization, as well as the personnel responsibilities of the line executive. Presents basic principles and procedures relating to employment, industrial health and safety, labor relations and morale, employee education and training, wage and salary administration.

Not open to students who have credit for Business Organization 689.

687. Production Organization and Management. Three credit hours. One Quarter. Autumn and Winter. Three class meetings each week. Prerequisite, Business Organization 680. Mr. Davis, Mr. Jucius.

An examination of the general staff function of production control and its relations with the line organization of the manufacturing division; the coordination of production with sales and finance; the coordination of various technical staff services with the requirements of the line function of production; routine planning, scheduling, and other control functions as they enter into interdepartmental coordination within the line organization.

700. Marketing. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Economics 401-402. Mr. Beckman, Mr. Cordell, Mr. Maynard, Mr. Nolen, Mr. Bartels, Mr. Brown.

A general but critical survey of the field of marketing. Consumer demand in relation to the marketing machinery. Functions, methods, policies, marketing costs, and problems of the farmer, manufacturer, wholesaler, commission merchant, broker, retailer, and other middlemen. Emphasis on principles, trends, and policies in relation to marketing efficiency.

703. Business Research. Three credit hours. Autumn Quarter. Two lectures and one two-hour laboratory period each week. Prerequisite, Business Organization 650, 680, and 700, Economics 522, and permission of the instructor.

Business research treated from the viewpoint of the business executive. The course deals with the discovery and utilization of existing information relating to problems of analysis other than accounting. It also includes a study of the fundamentals of primary data research, sampling, and schedule construction. Machine techniques used in the tabulating and analysis of data will be available through the Bureau of Business Research.

Not open to students who have credit for Business Organization 702.

705. Retail Merchandising. Four credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings each week. Prerequisite, Business Organization 700 and Accounting 402 or 405. Mr. Maynard, Mr. Dameron.

A consideration of the organization and management of retail establishments. Store location, store organization. Buying, receiving, stockkeeping, inventories. Sales system, store policies, services, deliveries. Expenses and profits. Personnel problems, etc.

706. Wholesaling. Four credit hours. One Quarter. Autumn and Spring. Four class meetings each week. Prerequisite, Business Organization 700 and Accounting 402 or 405. Mr. Beckman.

The field of wholesaling; types and classes of wholesale organizations; tendencies in wholesaling; wholesale centers. Organization and management of wholesale establishments including location, purchasing, receiving, stock control, advertising, selling, order filling, traffic management, credit granting, expenses, profits, etc.

709. Credits and Collections. Four credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings each week. Prerequisite, Business Organization 700 and Accounting 402 or 405. Mr. Beckman, Mr. Cordell, Mr. Bartels.

Credit—nature, functions, instruments, classes, risk, organization and management. Sources of credit information. Collection methods and policies. Extensions, compositions, adjustments, receiverships, bankruptcy, credit insurance, credit limits, credit and collection control.

712. Sales Management. Four credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings each week. Prerequisite, Business Organization 700 and Accounting 402 or 405. Mr. Maynard, Mr. Nolen, Mr. Brown.

This course deals with the functions of the sales manager. Principal topics considered are: sales organization; planning, quotas and territories; selecting, training, and compensating salesmen; stimulation and supervision; and the use of cost data as a guide to the formulation of sales policies.

713. Salesmanship. Two or three credit hours. One Quarter. Autumn and Spring. For all colleges other than Education, two class meetings each week. For the College of Education, two class meetings and one two-hour laboratory period each week. Prerequisite, Business Organization 700. Mr. Nolen, Mr. Brown.

Effective selling technique. The psychological, economic, and marketing foundations of the sales activities which are the basis of the daily work of the salesman. The material considered is designed to be of value to students throughout the University as well as those majoring in marketing or commercial education.

Not available for graduate credit for students majoring in Business Organization.

715. The Consumer in Our Marketing System. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Economics 402. Mr. Bartels.

The entire marketing system considered from the viewpoint of the consumer; the consumer movement; consumer attitudes toward marketing institutions, advertising, salesmanship, and standardization programs; marketing and credit practices, policies and institutions, including consumers' cooperatives, which affect the consumer; and government aid and protection to the consumer.

716. Principles of Advertising. Four credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings each week. Prerequisite, Business Organization 700, also Psychology 402 or 407. Mr. Dameron, Mr. Cordell.

A general course in advertising which considers the use of advertising and sales promotion in the sale of goods and services. Advertising agencies. Advertising departments. Copy, layout, illustrations, typography, engraving. Advertising media. Radio advertising. Advertising research. National advertising campaigns. Economics of advertising.

718. Radio Advertising. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Business Organization 716. Mr. Dameron.

Radio advertising from the viewpoint of the advertiser and of stations and networks selling radio time. History. Organization. Radio advertising problems: choosing the station, time and method of broadcasting, programs, writing commercials, merchandising the campaign, research. Radio advertising by retailers. Sales promotion by networks and stations. Regulation of radio advertising. Consumer viewpoints.

725. Field Work in Marketing. Three to six credit hours. All Quarters. May be repeated for an over-all credit of not more than six hours. Open only to students in the Marketing and retail merchandising curricula who have been assigned to field work positions which are properly supervised. Mr. Maynard, Mr. Beckman.

This course is open to students temporarily not in residence. The student is required to submit a report covering certain of the marketing problems of the company by which he has been engaged.

Not open for graduate credit.

CERAMIC ENGINEERING

Office, 126 Lord Hall

PROFESSORS CARRUTHERS, WATTS (EMERITUS), BOLE (RESEARCH), KING, BLAU, AND RUSSELL, AND ASSISTANT

401. Introduction to Ceramics. Four credit hours. Winter Quarter. Four lectures each week. Mr. Russell.

An introductory course on ceramic materials and products and clay technology.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

605. Bodies, Glazes, and Colors. Four credit hours. Spring Quarter. Four lectures each week. Prerequisite, Ceramic Engineering 401. Mr. Russell.

A study of raw materials, composition and processes used in the production of ceramic bodies, glazes, and colors.

750. Special Problems. One to seven credit hours. Autumn, Winter, and Spring Quarters. Conference, library and laboratory work. Prerequisite, fundamental ceramic engineering courses and consent of department. This course may be repeated for different problems or continuation of original problem, with total credit not to exceed fifteen hours. This course may not be used by an undergraduate student in meeting the elective requirements of the ceramic engineering curriculum. All instructors.

This course is designed to permit any properly qualified student to avail himself of the library and laboratory facilities of the department for carrying on a special investigation or for adding to his knowledge and technique in some ceramic subject.

CHEMICAL ENGINEERING

Office, 179, 180 Chemistry Building

PROFESSORS WITHROW, KOFFOLT, HERNDON, AND KAY, MR. KLASSEN,
MR. ROSE, AND ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

691. Elements of Chemical Engineering. Three credit hours. Winter Quarter. Two lecture-recitation hours and one two-hour computational laboratory each week. Prerequisite, differential and integral calculus and one year of college physics, except with special permission of the instructor. Mr. Koffolt.

The beginning of a thorough discussion of the engineering operations utilized in the chemical branch of engineering with emphasis on the engineering requirements of the market and economics and of the process and their effect on the engineering used. The work of this course is concerned with graphical chemical engineering methods and the study of the behavior of liquids and gases statically, during compression, and in flow. It is directed toward a study of the fundamental principles involved, the engineering equipment available, and by means of numerous computational problems, the quantitative relationships most frequently encountered in chemical industry.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

692. Elements of Chemical Engineering. Three credit hours. Spring Quarter. Two lecture-recitation hours and one two-hour computational laboratory each week. Prerequisite, differential and integral calculus and one year of college physics, except with special permission of the instructor. Mr. Koffolt.

A continuation of the study of the chemical engineering operations. The work of this course covers the applications of the basic principles of heat transfer to equipment design and operation problems of chemical industry. It is integrated with fluid flow work of Chemical Engineering 691. Emphasis is laid on computational problem work.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

695-696-697. Chemical Engineering Operations. Three credit hours. Summer, Autumn, and Winter Quarters. One three-hour lecture, recitation, and computational period each week. Prerequisite, differential and integral calculus and one year of college physics. Mr. Koffolt, Mr. Pence.

Fundamental courses in Chemical Engineering Operations covering computational problems and chemical engineering equipment. Work will cover such chemical engineering operations as

flow of fluids, heat transfer, evaporation, crushing and grinding, mechanical separation, filtration, drying, absorption, extraction, distillation, and adsorption. The three Quarters work will in general be independent and may be taken in any order.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

701-702. Industrial Chemistry. Three credit hours. Autumn and Winter Quarters. Three lectures each week. Prerequisite or concurrent, physical chemistry, except with special permission of the instructor. Mr. Withrow, Mr. Klassen, Mr. Pence.

The fundamental lecture course in the problems of industrial chemistry or chemical technology dealing with the problems of the chemical industries and stressing comprehensive and detailed computational treatment involving the applications of the fundamentals of economics, mathematics, physics, chemistry, chemical engineering, etc., to the solution of problems involving integration in part or in detail of sequences of chemical and engineering operations which make up processes. The work of the Autumn Quarter deals especially with the inorganic industries, while that of the Winter Quarter is related to the organic industries.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

***703. Inspection Trip to the East.** Two credit hours. One week between the Winter and Spring Quarters, 1949, and odd-numbered years thereafter. Prerequisite: for Seniors, Chemical Engineering 701-702; for Juniors, Chemical Engineering 691-692, or special permission of instructor. Mr. Withrow, Mr. Koffelt.

The trip includes Rittman, Akron, and Cleveland, Ohio; Niagara Falls, Rochester, and New York, New York; Grasselli, and Deep Water Point, New Jersey; Wilmington, Baltimore, and Curtis Bay, Maryland; and Washington, D. C. The entire expense need not exceed \$70.00. A satisfactory written report upon the work of the trip is required. Junior emphasis is confined to engineering.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

704. Inspection Trip to the West. Two credit hours. One week between the Winter and Spring Quarters, 1948, and even-numbered years thereafter. Prerequisite: for Seniors, Chemical Engineering 701-702; for Juniors, Chemical Engineering 691-692, or special permission of instructor. Mr. Withrow, Mr. Koffelt.

The trip includes Dayton, West Carrollton, Hamilton, Cincinnati, and Ivorydale, Ohio; Kensington, Ill.; Grasselli and Whiting, Ind.; Chicago and Argo, Ill.; Detroit, Wyandotte, and Midland, Mich. The entire expense need not exceed \$55.00. A satisfactory written report upon the work of the trip is required. Junior emphasis is confined to engineering.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

706. Chemical Engineering and Industrial Chemistry Laboratory. Two to five credit hours. Autumn Quarter. One hour conference and five to fourteen laboratory hours each week. Prerequisite or concurrent, Chemical Engineering 694 and 701, and an acceptable course in analytical chemistry. Mr. Withrow, Mr. Herndon, Mr. Klassen, Mr. Rose and assistants.

An introduction to industrial chemical research through assigned manufacturing problems, beginning with the preliminary analysis of an inorganic, and organic production problem, progressing through the logical steps of laboratory development to the final culmination of the investigation—the design and layout of equipment of the plant to make the given chemical product. Emphasis is placed on the correlation and integration of the fundamental courses in chemistry, mathematics, chemical engineering operations, engineering drawing, etc. The specific problems are so chosen as to disclose the fundamental principles underlying the assigned industry. Weekly inspection trips are taken to plants in and around Columbus for study and report upon equipment and operation. Great emphasis is laid upon methods of attacking problems and upon organization of written and oral reports. Certain types of problems with engineering equipment and in factory research are required of all students, after which opportunity is given the student to select special problems in various portions of the fields of chemical engineering such as absorption systems, filtration, etc., and in industrial chemistry such as petroleum, sugar technology, intermediates, wood distillation, insecticides, starch, lime, chlorine, and plant fume questions.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

* Not given in 1947-1948.

707. Engineering Chemistry and Chemical Engineering Laboratory. Three credit hours. Winter Quarter. One conference and eight laboratory hours each week. Prerequisite, Chemical Engineering 706; concurrent, Chemical Engineering 702. Mr. Herndon, Mr. Witihrow, Mr. Klassen, Mr. Rose and assistants.

A continuation of Chemical Engineering 706. Special emphasis is laid upon technical methods of control, as applied to industrial chemical processes and upon control of technical products according to standard American Society for Testing Materials methods and with standard equipment pointing out how test underlies engineering design.

Elective for students in the Colleges of Arts and Sciences and Education and in the Graduate School.

763. Applied Electrochemistry. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, Chemistry 681-682-683 or special permission. Mr. Herndon.

A survey of the electrochemical industries and a discussion of the principles underlying the application of the electric current in chemical industries. Quantitative relationships and application of thermodynamics are stressed, requiring the solution of numerous problems.

Elective for students in the College of Arts and Sciences and Education and in the Graduate School.

Not open to students who have credit for Chemical Engineering 710.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of graduate courses in this department, see the Bulletin of the Graduate School.

CHEMISTRY

Office, 116 Chemistry Building

General Chemistry Office, 115 Chemistry Building

PROFESSORS MACK, BOORD, FRANCE, JOHNSTON, MOYER, BRODE, WOLFROM, HENNE, NEWMAN, GARRETT, HASKINS, AND HARRIS, ASSOCIATE PROFESSORS MacNEVIN, VERHOEK, LASSETTRE, WIRTH, MacWOOD, AND CALEY, NON-RESIDENT ASSOCIATE PROFESSOR ROTHMUND (KETTERING FOUNDATION, ANTIOCH COLLEGE), ASSISTANT PROFESSORS HOLLINGSWORTH, SISLER, SHECHTER, GORDON, RUBIN, AND KURBATOV, INSTRUCTOR HERREN, AND ASSISTANTS

407. Elementary Chemistry. Five credit hours. Autumn and Winter Quarters. Three lectures, one recitation and one three-hour laboratory period each week. Designed for students majoring in Physical Education, Nursing, Occupational Therapy, and other students who expect to take only two Quarters of chemistry. Mr. Haskins and assistants.

A course in the general chemistry of the more important elements and compounds. To be followed by Chemistry 408.

Not open to students who have credit for Chemistry 411. This course will not be accepted as prerequisite for Chemistry 412 except by proficiency examination.

408. Elementary Chemistry. Five credit hours. Winter and Spring Quarters. Three lectures, one recitation, and one three-hour laboratory period each week. Open to students majoring in Physical Education, Nursing, Occupational Therapy, and other students who expect to take only two Quarters in chemistry. Mr. Haskins and assistants.

A continuation of Chemistry 407 including a study of the more important compounds of carbon, such as petroleum, foods, fabrics, rubber, etc.

Not open to students who have credit for Chemistry 412. This course will not be accepted as prerequisite for Chemistry 413 except by proficiency examination.

411. General Chemistry. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures, one recitation, and two two-hour laboratory periods

each week. Mr. Garrett, Mr. Haskins, Mr. Verhoek, Mr. MacWood, Mr. Rubin, Mr. Sisler, Mrs. Kurbatov, Mr. Shechter, and Mrs. Herren, and assistants.

A general course on the chemistry of the most important non-metals and the fundamental chemical principles. To be followed by Chemistry 412.

Students will be placed in recitation and laboratory sections in accordance with their ability and proficiency in chemistry, physics, general science, and mathematics. Students who show a high proficiency in these subjects will be given Em credit for Chemistry 411 and will be advanced at once to Chemistry 412.

412. General Chemistry. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures, one recitation, and two two-hour laboratory periods each week. Prerequisite, Chemistry 411. Mr. Garrett, General Chemistry Staff and assistants.

A continuation of Chemistry 411. The chemistry of the non-metals is concluded and such topics as oxidation-reduction, chemical equilibrium, etc., are discussed, and the study of the metals is started. To be followed by Chemistry 413.

Students will be placed in the recitation and laboratory sections in accordance with their proficiency in Chemistry 411.

412-P. General Chemistry. Five credit hours. Autumn Quarter. Two lectures, one recitation, and two two-hour laboratory periods each week. An honors course for proficiency students granted Em credit in Chemistry 411. Mr. Garrett, General Chemistry Staff and assistants.

The chemistry of the non-metals is studied and such topics as oxidation-reduction, chemical equilibrium, etc., are discussed. The study of the metals is started. To be followed by Chemistry 413-P.

413. Qualitative Analysis. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures, one recitation and two three-hour laboratory periods each week. Prerequisite, Chemistry 412. Mr. Garrett, General Chemistry Staff, and assistants.

A general course in the chemistry of the common metals and qualitative analysis, dealing with the systematic separation and identification of the cations and anions. It also includes the application of the ionization theory, mass action law, and the principles of chemical equilibrium to qualitative analysis.

Students will be placed in recitation and laboratory sections in accordance with their proficiency in Chemistry 412.

413-P. Qualitative Analysis. Five credit hours. Winter Quarter. Two lectures, one recitation and two three-hour laboratory periods each week. Prerequisite, Chemistry 412-P. Mr. Garrett, General Chemistry Staff, and assistants.

A general honors course in the chemistry of the common metals and qualitative analysis, dealing with the systematic separation and identification of the cations and anions. It also includes the applications of the ionization theory, mass action law, and the principles of chemical equilibrium to qualitative analysis.

421-422-423. Quantitative Analysis. Three or four credit hours. Three Quarters. 421, Autumn, Winter, Spring; 422, Autumn, Winter, Spring; and 423, Autumn, Winter, Spring. One recitation and six or nine laboratory hours each week. Prerequisite, acceptable courses in general chemistry, including qualitative analysis. Mr. Moyer, Mr. Hollingsworth, Mr. MacNevin, Mr. Caley, Mr. Gordon, and assistants.

The fundamental course in quantitative analysis. Chemistry 421 and 422 are devoted to gravimetric and volumetric analysis. Chemistry 423 is largely instrumental methods of analysis and includes colorimetric analysis, electrolytic precipitation, determination of the index of refraction, polarimetry, the determination of pH values, potentiometric and conductometric titration.

Students from different colleges or students having different interests may choose exercises to meet their particular needs.

(a) Students in Chemical Engineering will take this course for four credit hours, in order to meet the prerequisites of subsequent courses. Other qualified students may also elect four credit hours.

(b) Students in Premedical, Medical, Medical Technology, Ceramic Engineering and Pharmacy courses; other non-chemical students may take this course for three credit hours.

424. Problems in Quantative Analysis. One credit hour. Spring Quarter. Prerequisite, two Quarters of quantitative analysis. Mr. Caley.

Calculations of Quantitative Chemical Analysis.

431-432-433. Quantitative Analysis. Five credit hours. Autumn, Winter, and Spring Quarters. Two recitations and nine laboratory hours each week. Prerequisite, acceptable courses in general chemistry including qualitative analysis. Mr. Moyer, Mr. Hollingsworth, Mr. MacNevin, Mr. Caley, Mr. Gordon, and assistants.

Elementary quantitative analysis for students majoring in chemistry.

Not open to students who have credit for Chemistry 421-422-423.

451-452. Organic Chemistry. Five credit hours. Two Quarters. 451, Autumn and Winter; 452, Winter and Spring. Three lectures and two three-hour laboratory period each week. Prerequisite, one year of general chemistry including qualitative analysis. Mr. Boord, Mr. Brode, Mr. Wolfrom, Mr. Henne, Mr. Newman, and assistants.

A general introductory course in organic chemistry including laboratory preparations, arranged for students preparing for Dentistry, Veterinary Medicine, Medical Technology, and Pharmacy.

563. Physical Chemistry. Five credit hours. Spring Quarter. Three lectures and eight laboratory hours each week. Prerequisite, an acceptable course in organic chemistry or the permission of the instructor. Mr. France, and assistants.

A brief study of the fundamental principles of physical chemistry arranged for students in the biological sciences or in other non-chemical fields, who wish to make a brief survey of physical chemistry.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

647-648. Organic Chemistry. Three credit hours each. Two Quarter. 647, Autumn, Winter, Spring; 648, Autumn, Winter, Spring. Three lectures or recitations each week. Prerequisite, acceptable courses in general and analytical chemistry. Mr. Boord, Mr. Brode, Mr. Wolfrom, Mr. Henne, Mr. Newman.

A fundamental course in organic chemistry. Chemistry 647 is devoted to a discussion of the aliphatic hydrocarbons and their derivatives and Chemistry 648 to a discussion of the coal tar compounds.

Not open to students who have credit for Chemistry 451-452.

Not available for graduate credit for students majoring in chemistry.

649. Organic Chemistry: Laboratory. Three credit hours. One Quarter. Autumn, Winter, Spring. Nine laboratory hours each week. Prerequisite or concurrent, Chemistry 647. Mr. Brode, Mr. Boord, Mr. Wolfrom, Mr. Henne, Mr. Newman, and assistants.

The laboratory work naturally belonging with Chemistry 647. The preparation of a series of typical organic compounds, their purification, and a study of their properties.

Not open to students who have credit for Chemistry 451-452.

Not available for graduate credit for students majoring in chemistry.

650. Organic Chemistry: Laboratory. Two or three credit hours. One Quarter. Winter and Spring. Nine laboratory hours each week. Prerequisite, Chemistry 649; prerequisite or concurrent, Chemistry 648. Mr. Brode, Mr. Boord, Mr. Wolfrom, Mr. Henne, Mr. Newman, and assistants.

A continuation of Chemistry 649.

Not available for graduate credit for students majoring in chemistry.

681. Physical Chemistry. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite or concurrent, acceptable courses in organic chemistry, physics, and two Quarters of calculus. It is recommended that Chemistry 691 be taken concurrently with this course. Mr. France, Mr. Johnston, Mr. Harris, Mr. Mack, Mr. Wirth.

The fundamental course in physical chemistry.

Not available for graduate credit for students majoring in chemistry.

682. **Physical Chemistry.** Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Chemistry 681. It is recommended that Chemistry 692 be taken concurrently. Mr. France, Mr. Johnston, Mr. Harris, Mr. Mack, Mr. Wirth.

A continuation of Chemistry 681.

Not available for graduate credit for students majoring in chemistry.

683. **Physical Chemistry.** Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, Chemistry 682. It is recommended that Chemistry 693 be taken concurrently. Mr. France, Mr. Johnston, Mr. Harris, Mr. Mack, Mr. Wirth.

A continuation of Chemistry 682.

Not available for graduate credit for students majoring in chemistry.

691-692-693. **Physical Chemistry: Laboratory.** Two credit hours. Autumn, Winter, and Spring Quarters. Six laboratory hours each week. Prerequisite or concurrent, an acceptable course in physical chemistry. These courses are designed to accompany Chemistry 681, 682, and 683, respectively. Mr. Wirth, and assistants.

Quantitative measurements of phenomena of chemical interest and the application of chemical principles to their interpretation. The measurements include experiments in the determination of molecular weights and chemical constitution, thermochemistry, reaction rates, equilibria, electrochemistry, colloid chemistry, high vacuum and glass blowing techniques, etc.

701. **Minor Problems in Chemistry.** One to fifteen credit hours. Any Quarter. Conference, library, and laboratory work. Prerequisite, satisfactory courses in the field of the problem undertaken. A student may repeat this course and may spend all or any part of his time on it during a Quarter. Department Staff.

This course is designed to permit any properly qualified person to avail himself of the library and laboratory facilities of the department for carrying out a minor investigation or for adding to his knowledge and technique in some chemical subject. A student may exercise entire freedom in his choice of instructor to conduct his work in this course.

728. **Spectroscopic Analysis.** Three to five credit hours. Spring Quarter. One lecture and two to four laboratory periods each week. Prerequisite, acceptable courses in quantitative analysis. Registration for more than three credit hours requires permission of the instructor. Mr. Brode.

General principles of spectroscopic qualitative identification and quantitative estimation of the elements. Spectrophotometry of organic and inorganic compounds. Special applications to metallurgy, plant and bio-chemical analysis, identification of dyes and organic compounds.

Not open to students who have credit for Chemistry 628.

754. **X-rays and Crystal Structure.** Four credit hours. Winter Quarter. Three lectures and one three-hour laboratory period each week. Prerequisite, calculus and one year of college physics. Mr. Harris.

An introduction to the methods of X-ray crystal analysis. Theory of symmetry of crystals and of diffraction will be discussed and applied in connection with the conventional single crystal and powder methods of structure analysis.

Not open to students who have credit for Chemistry 654, Mineralogy 754, or Physics 754.

755. **X-ray and Electron Diffractions.** Three credit hours. Spring Quarter. Three lectures each week. This course is designed to follow Chemistry 754. Mr. Harris.

An extended consideration of the theory of X-ray and electron diffraction and their application including Fourier methods of parameter determination in crystals, etc.

761. **Advanced Inorganic Chemistry.** Three credit hours. Autumn Quarter. Three lectures or recitations each week. Prerequisite, Chemistry 681-682-683 or its equivalent. Mr. Sisler, Mr. Rubin.

An elementary discussion of the theory of atomic structure and the electronic configurations of the elements in relation to the periodic system, followed by an introduction, on a non-mathematical basis, to the modern theory of the chemical bond.

A systematic study of the families of the elements and their compounds will be included.

Emphasis will be placed (1) on the equilibria and factors influencing the speed of reactions, and (2) on the relation of properties of the elements and their compounds to atomic and molecular structure.

Not open to students who have credit for Chemistry 661.

762. Advanced Inorganic Chemistry. Three credit hours. Winter Quarter. Three lectures or recitations each week. Prerequisite, Chemistry 761. Mr. Rubin, Mr. Sisler.

A continuation of Chemistry 761.

Not open to students who have credit for Chemistry 662.

768. Non-aqueous Solvents. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite or concurrent, Chemistry 683. Given in alternate years. Mr. Verhoek.

A consideration of the properties of electrolytes in non-aqueous solutions, the strength of acids and bases in non-aqueous solvents, and the non-aqueous analogues of the water system of compounds.

Not open to students who have credit for Chemistry 668.

772. Inorganic Chemistry: Laboratory. Three credit hours. Spring Quarter. Nine laboratory hours each week. Prerequisite, acceptable courses in general chemistry, quantitative analysis, and Chemistry 681-682-683. Mr. Rubin, Mr. Sisler.

Minor problems in the use of modern techniques in the field of synthetic and physical inorganic chemistry including the use of liquified gases, low temperature and high temperature apparatus, high pressure and high vacuum apparatus, oxygen-free systems, etc.

Not open to students who have credit for Chemistry 672.

782. Chemical Bibliography. One credit hour. Autumn Quarter. One conference each week. Prerequisite, acceptable courses in analytical and organic chemistry. Mr. Brode.

Designed to train the advanced student in the use of the chemical library, and to instruct him in the character of various chemical journals, dictionaries, reference books, and other sources of information pertaining to chemical subjects.

784. History of Chemistry. Two credit hours. Spring Quarter. Two lectures each week. Prerequisite, acceptable courses in analytical and organic chemistry. Mr. Haskins.

A general course in the history of chemistry with special reference to the development of the theories of the science.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 684.

NOTE: For Industrial Chemistry Courses see the Department of Chemical Engineering.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

CLASSICAL LANGUAGES AND LITERATURE

Office, 217 Derby Hall

PROFESSOR TITCHENER, HOUGH AND ABBOTT, ASSISTANT PROFESSOR JONES

CLASSICAL LANGUAGE COURSE IN ENGLISH

No prerequisites in Latin or Greek.

507. Roman Private Life. Three credit hours. Winter Quarter. Mr. Hough.

Lectures, illustrated with lantern slides on the daily life and customs of the Romans, their business and family relations, their amusements, dress, homes, and household furniture. A knowledge of Latin is not required for this course, and it is open to all students who are interested in the subject.

GREEK

401. Elementary Greek. Five credit hours. Autumn Quarter. Mr. Jones.

This course covers the outlines of the grammar with practice in the translation of simple selections.

402. Elementary Greek. Five credit hours. Winter Quarter. Prerequisite, Greek 401 or its equivalent. Mr. Jones.

Reading in selected passages of Greek prose.

403. Plato. Five credit hours. Spring Quarter. Prerequisite, Greek 402. Mr. Jones.

Reading in the easier dialogues; the personalities of Socrates and Plato and their work.

504. Homer. Five credit hours. Autumn Quarter. Prerequisite, Greek

402. Mr. Jones.

Reading in the Iliad and Odyssey: the epic poetry of Greece.

NOTE: For course in Principles of the Historical Study of Language, see German 705.

LATIN

Students with two years of high school Latin should enroll in Latin 404; with three years of high school Latin, including Cicero, in Latin 406; with three years of high school Latin, including Vergil, in 404 or 406. 406 is advised for Latin majors.

401. Elementary Latin. Five credit hours. Autumn Quarter. This course is for students who have not studied Latin.

Grammar and practice in translation of the Latin idiom.

402. Elementary Latin and Caesar. Five credit hours. Winter Quarter. Prerequisite, Latin 401.

Continuation of grammar and selected readings.

403. Caesar. Five credit hours. Spring Quarter. Prerequisite, Latin 402.

The Gallic War.

404. Cicero. Five credit hours. Autumn Quarter. Prerequisite, Latin 401-403 or two years of high school Latin.

Readings from Cicero with review of syntax.

405. Vergil. Five credit hours. Winter Quarter. Prerequisite, Latin 404 or the equivalent in high school Latin. Mr. Abbott.

Readings from the Aeneid.

406. Horace. Five credit hours. Winter Quarter. Prerequisite, Latin 401-405 or three years of high school Latin. Mr. Titchener.

The Odes of Horace through the first book with selected poems of the later books.

407. Livy. Five credit hours. Autumn Quarter. Prerequisite, Latin 405 or 406. Mr. Titchener.

The first book of Livy describing the founding of the Roman state.

408. Latin Comedy. Five credit hours. Spring Quarter. Prerequisite, Latin 405, 406, or 407. Mr. Jones.

Selected plays of Plautus and Terence.

501. Tacitus, Martial. Three credit hours. Winter Quarter. Prerequisite, Latin 407 or 408.

502. Letters of Pliny and Cicero, Catullus. Three credit hours. Autumn Quarter. Prerequisite, Latin 407 or 408.

503. Ovid, Sallust, or Petronius. Three credit hours. Spring Quarter. Prerequisite, Latin 407 or 408.

505. Grammatical Review. Three credit hours. Autumn Quarter. Prerequisite, Latin 407 or 408. Mr. Titchener.

This course should be taken concurrently with a translation course.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

608. Roman Art and Archaeology. Three credit hours. Winter Quarter. Prerequisite, for majors in Classical Languages, six Quarters of college Latin; for students in the School of Fine and Applied Arts, Fine Arts 501; other qualified students may be admitted by special arrangement. Mr. Hough.

Study of Roman architecture, sculpture, and painting. Lectures, discussions and reports on special topics.

612. Latin Prose Composition. Three credit hours. Winter Quarter. Prerequisite, five Quarters of college Latin. Mr. Abbott.

Exercises and lectures on Latin idiom and style.

615. Proseminar I. Three credit hours. Winter Quarter. Prerequisite, six Quarters of college Latin. Mr. Abbott.

Lectures on the life and period of Cicero. Readings from the Letters and Essays. Latin 615 is designed especially for students preparing to teach Latin.

616. Proseminar II. Three credit hours. Spring Quarter. Prerequisite, six Quarters of college Latin. Mr. Hough.

Lectures on the life and works of Vergil, and his influence on modern literature; readings from the Eclogues and the Georgics. Latin 616 is designed especially for students preparing to teach Latin.

617. Proseminar III. Three credit hours. Autumn Quarter. Prerequisite, six Quarters of college Latin. Mr. Hough.

Lectures on topics suggested by the study of Caesar's Gallic and Civil Wars; special consideration of literary style, political and military campaigns. Latin 617 is designed especially for students preparing to teach Latin.

627. Vulgar Latin. Three credit hours. Winter Quarter. Prerequisite, six Quarters of college Latin, French 801, or equivalent linguistic basis. Mr. Abbott.

Lectures and the study of texts and inscriptions illustrating the development of the popular speech.

631. Private Reading and Minor Problems. One to six credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, one reading course more advanced than Latin 408. The Staff.

Passages for private reading and topics for investigation will be suggested to meet the needs of individual students.

650-651-652. History of Roman Literature. Three credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, three reading courses more advanced than Latin 408. The content of the readings within this course is so extensive that graduate students may repeat this course for credit. Mr. Titchener.

Lectures and assigned reading in literary histories on the development of Roman Literature; required and suggested passages for translation in each author studied; brief weekly reports.

720. Introduction to Historical Greek and Latin Grammar. Three credit hours. Autumn Quarter. Prerequisite, ten hours of advanced work in the classics. Mr. Abbott.

***721-722. Historical Greek and Latin Grammar.** Three credit hours. Winter and Spring Quarters. Prerequisite, ten hours of advanced work in the classics. Mr. Abbott.

755. Advanced Archaeology. Three credit hours. Spring Quarter. Prerequisite, ten hours of Classical Languages or Fine Arts 501; for classical majors, ten hours of advanced work in the Department of Classical Languages. Mr. Hough.

Particular attention will be given to the topography and excavations of the city of Rome.

* Not given in 1947-1948.

756. Advanced Archaeology. Three credit hours. Winter Quarter. Prerequisite, ten hours of Classical Languages or Fine Arts 501. For classical majors, ten hours of advanced work in the department of Classical Languages. Mr. Hough.

Lectures and reports in the fields of painting, sculpture, architecture, and archaeology.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 694.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

COMPARATIVE LITERATURE AND LANGUAGE

Courses formerly offered under the above heading will be found under the Departments of Classical Languages and Literature, and German.

CONSERVATION

401. Introduction to Conservation of Basic Natural Resources. Three credit hours. Spring Quarter. Three lecture and discussion hours each week.

An orientation course designed for all students interested in the broad concepts of conservation and in the interrelations of the technical, economic, social, and political aspects of conservation with human life and activities. The reasons for public concern with the conservation and improvement of soil, water, plant and animal life, forest and mineral resources and in wildlife will be studied. This course offers a general introduction to the field of conservation rather than specialized or professional training.

DENTAL HYGIENE

(For curriculum see page 63. For courses see the Bulletin of the College of Dentistry.)

DRAWING

(See Engineering Drawing)

ECONOMICS

Office, 101B Hagerty Hall

PROFESSORS BOWERS, WOLFE (EMERITUS), HAYES, DICE, KIBLER, SALZ, SMART, JAMES, HERBST, PATTON, AND DEWEY, ASSOCIATE PROFESSORS HARRISON AND CAPLAN, ASSISTANT PROFESSORS STEVENS, MILLER, ARNOLD, CALDERWOOD, LINDHOLM, QUANTIUS, BECKER, COONS, AND LOVENSTEIN, MR. LIMING, MR. LYNN, MR. MCKINLEY, MR. O'DONNELL, MR. TUTTLE, AND LECTURERS, ASSISTANT INSTRUCTORS, AND ASSISTANTS

400. Survey of the Development of Modern Economic Society. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Open only to Freshmen and Sophomores. Mr. Patton and others.

A study of the dominant historic forms of economic organization designed to provide a basis for understanding both the evolutionary nature of society and the role of capitalism in social development.

401-402. Principles of Economics. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. Five class meetings each week. Not open to Freshmen. Mr. James and others.

A study of the organization and operation of our economic system, with the objective of developing an intelligent understanding of our present economic problems. Among the subjects studied are cost and price relationships; money and banking; taxation; labor problems; agricultural economics; international trade and finance; and public control of business activity.

NOTE: Freshmen with a cumulative point-hour ratio of 3.0 or above on their first two Quarters of work may enroll for this course in their third Quarter in residence, if they have already secured credit for Economics 400 and Business Organization 401.

A special section of each of these courses is given for capable students who are especially

interested in the field of economics. These sections are designed to give such students an opportunity for more varied, intensive, and independent work than is possible in the regular sections. Enrollment is limited and is by permission only. For further information or permission to enroll, apply to Mr. Jamee.

406. Outlines of Economics. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Mr. Harrison.

An analysis and description of the basic characteristics of our economic system; a study of the significant problems arising in its operation and an appraisal of their proposed solutions.

430. Economic History of the United States. Five credit hours. Winter Quarter. Five class meetings each week. Prerequisite, Economics 401 or 406, or History 403-404. Mr. Harrison.

Traces the economic development of the United States from colonial days down to the present. Emphasis will be given to the gradual shift from a frontier, agricultural economy to that of large scale industry and commerce. The economic and social problems arising in connection with this change and the solutions proposed and attempted will be discussed.

Not open to students who have credit for Economics 501-502.

503. The Evolution of Modern Capitalism. Five credit hours. Spring Quarter. Five class meetings each week. Prerequisite, Economics 402, 406, or History 401-402. Mr. Calderwood.

A survey of the evolution of modern European capitalism since the sixteenth century and the accompanying changes of the Industrial Revolution and the factory system in banking, transportation, labor and industrial organization.

510. Labor Problems. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 401-402 or Economics 406 and Sociology 410. Miss Herbst, Mr. Miller.

A general survey of the problems of the wage-earner. Collective bargaining and trade unionism, labor legislation, and social insurance are discussed as means of dealing with these problems.

Not open to students who have credit for Economics 637, 638 or 639.

520. Money and Banking. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Economics 401-402. Mr. Dice, Mr. Kibler, Mr. Stevens, Miss Quantius, Mr. McKinley.

This course is intended as an introductory study to the more technical courses in banking and finance and also to give a comprehensive view of the field for those who are primarily interested in other subjects. The organization, operation, and economic significance of our monetary and banking institutions are discussed, with special reference to current conditions and problems.

522. Elementary Economic Statistics. Four credit hours. One Quarter. Autumn, Winter, Spring. Three lectures and one two-hour laboratory period each week. Prerequisite, Economics 401-402. Mr. Smart, Mr. Tuttle.

Collection of primary statistical data. Primary and secondary sources. Tabular and graphic presentation. Ratios. The frequency distribution. The partition values and measures of location, dispersion, skewness and kurtosis. Sampling. Tests of significance. Analysis of time series with special emphasis on index numbers. Simple rectilinear correlation.

527. Statistical Work Experience. Three credit hours. Autumn, Winter, Spring. Three-hour work periods and one conference period each week. Prerequisite, Economics 522 or equivalent. Mr. Arnold and assistants.

Practical experience in statistics in the Bureau of Business Research involving current economic, social and business data. Special emphasis on the various techniques used in the organization and presentation of data to facilitate analysis. Procedures involved in the computation of weighted and unweighted index numbers and other types of ratio, and practice in the use of computing machines, key punch, sorting and tabulating equipment.

Not open to students who have credit for National Service Course 527.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601-602-603. Intermediate Economic Analysis. Three credit hours. Three

Quarters. 601, Autumn; 602, Winter; 603, Spring. Three class meetings each week. Mr. James.

A review of the scope and nature of economic analysis; competitive and monopolistic markets in the allocation of consumers' goods and inputs of the factors of production; coordination of basic economic processes at different output-levels.

604-605. Current Economic Problems. Three credit hours. Two Quarters. 604, Autumn; 605, Winter. Three class meetings each week. Prerequisite, Economics 401-402. Mr. Hayes.

The first course (604) deals particularly with current conditions in respect to the volume of employment; the composition and volume of the Gross National Product, the underlying conditions of consumer expenditures, savings, investments, and plans for maintaining or securing full employment. The second course (605) deals with other problems of immediate interest such as agricultural production and prices, housing, health and educational programs, regional planning and development, and the federal budget.

613. Money and Banking: Problems and Policies. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 520 or its equivalent. Mr. Dice.

This course is an advanced treatment of certain special problems introduced in Economics 520. Emphasis is placed on recent changes in our monetary and banking system. The functions of Central Banks and the Treasury are analyzed. A survey of the monetary and banking systems of Canada, England, and Russia forms an important section of the course.

Not open to students who have credit for Economics 706.

624. Principles of Insurance. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 401-402. Mr. Bowers, Mr. Ley, Mr. Becker.

A study of the theory and practice of the principal types of insurance in the life, fire, and casualty fields. The economic theory of risk; loss prevention; state supervision, etc.

627. Analysis and Control of Business Cycles. Three credit hours. Spring Quarter. Prerequisite, Economics 401-402. Mr. Hayes.

A general survey of changes in price levels and production. Past and current theories of business cycles. Proposed plans for control of economic fluctuation.

631-632-633. Public Finance. Three credit hours. Three Quarters. 631, Autumn; 632, Winter; 633, Spring. Prerequisite, Economics 401-402. Mr. Smart.

A study of the problems connected with the debts, expenditures, revenues, and fiscal administration of national, state, and municipal governments.

637. Labor Relations. Five credit hours. Autumn Quarter. Five class meetings each week. Prerequisite, Economics 401-402. Miss Herbst.

The problems of labor considered with reference to the labor movement; the history of trade unionism; types; theories; policies; methods; legal status of trade unions; the strike; the boycott; the injunction. Types of governmental intervention.

638. Labor and Government. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 401-402. Miss Herbst.

State activity in relation to labor. The operation of protective legislation relating to child labor, wages, hours. Special consideration is given to the operation of the federal National Labor Relations Act and the Fair-Labor Standards Act. Reference is made to Ohio statutes and their administration.

639. Social Insurance. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Economics 401-402. Mr. Bowers.

Efforts to guarantee security to the worker. Accident insurance; employers' and workmen's compensation; health hazards and health insurance. Old age insurance and pensions; unemployment and its prevention; unemployment insurance. Compulsory automobile insurance.

640. The International Organization of Labor. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Economics 401-402. Miss Herbst.

American and foreign labor movements viewed historically in relation to economic, political, and legal institutions. Labor problems that transcend national boundaries. The International Labor Organization and the United Nations' Organization.

Not open to students who have credit for Economics 513.

645. Consumption Economics. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 401-402. Miss Herbst.

Consumption economics from the standpoint of the individual and of society; the consumption problem in the price system; variations and inequalities of income; price levels and the cost of living; influence determining consumer choice; standards of economy of consumption.

660. Population. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Economics 401-402. Mr. Harrison.

The growth and distribution of population. The relation of numbers to resources, productive capacity, standard of living, prosperity, and international economic problems. The dynamic aspects of population in relation to material and moral progress. Critical consideration of population theories and policies.

Not open to students who have credit for Economics 658-659.

664-665-666. International Economic Problems. Three credit hours. Three Quarters. 664, Autumn; 665, Winter; 666, Spring. Prerequisite, Economics 401-402. Mr. James.

Theories of international trade; the United States and major industrial countries as related to the world economy in terms of their balance of payment; international economic policy; types of trade restrictions; new organizations for stabilization of international trade and finance.

Not open to students who have credit for Economics 634-635, or 651.

669. Socialism and Related Movements. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Economics 401-402. Mr. Hayes.

The developments of capitalism and protest movements related thereto such as utopian socialism, Marxian socialism, anarchism, syndicalism and state socialism. Comparison of proposed schemes with capitalism in respect to the determination of the lines of production to be followed, the maintenance of full employment, the encouragement of progress, and the distribution of income.

671. Contemporary Economic Systems. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 401-402. Mr. Hayes.

The economic aspects of collectivism in Russia and economic developments in Great Britain and other countries. Comparisons with capitalism in the United States.

673. Principles of Social Economy. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, ten hours of economics and ten hours of history, philosophy, political science, psychology, sociology, or geography; or thirty hours in any combination of the subjects listed. Mr. Salz.

The intent of this course is to arrive at some insight into the meaning and criteria of ideal economy, not in its material and technological, but in its fundamental human aspects. Purposive economics in relation to fundamental human values. Fundamental values and instrumental values. The means-end relation and the principle of economy of means. Income as opportunity, and the economic criteria of distribution of opportunity. The conflict between efficiency, liberty, and the ideal use of resources, material and human. Democracy and authoritarianism in relation to economy. An economic interpretation of social conflict and social ethics.

679. Economic Problems of Postwar Europe. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Economics 402. Mr. Salz.

Economic problems of postwar Europe with special consideration to Germany.

710-711-712. Statistical Analysis. Two credit hours. Three Quarters. 710, Autumn; 711 Winter; 712, Spring. Prerequisite, four credit hours of Statistics and permission of the instructor. Mr. Smart.

Analysis of frequency distributions, correlation and the analysis of variance. Sampling, the design of statistical inquiries and tests of significance as well as the control of the quality of product from the statistical point of view will be emphasized. The use of tabulating and mechanical equipment in handling statistical problems will be treated.

716-717-718. Public Control of Economic Processes. Two credit hours. Three Quarters. 716, Autumn; 717, Winter; 718, Spring. Prerequisite, Economics 402. Mr. Kibler.

The transition from laissez-faire to governmental, economic control with emphasis on the changed conditions which have rendered competition either ineffective or inadvisable as a regulator

of certain phases of the economy in the public interest. The course includes analyses and appraisals of theories, policies, and control measures instituted by the United States and other selected countries.

725. Production Economics. Five credit hours. Autumn Quarter. Five class meetings each week. Prerequisite, Economics 401-402 or 403-404. Mr. Coons.

A study of input-output relationships as experienced in industry and agriculture; the application of business and economic analyses to these relationships; the least cost combination and the optimum size of production units; costs and returns.

799. Special Problems in Economics. One to three credit hours in any Quarter, with a maximum total of five credit hours. Any Quarter. Prerequisite, satisfactory advanced courses in economics and related fields. Senior Staff.

Individual study in some field of economic interest under the direction of the appropriate member of the staff.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

EDUCATION

Office, 120 Arps Hall

PROFESSORS EIKENBERRY, ALBERTY, ANDERSON, BODE (EMERITUS), CAHOON, ECKELBERRY, FAWCETT, GOOD, HECK, HULLFISH, KLEIN (EMERITUS), LANDSITTEL, LEWIS, REEDER, SANDERSON, SEELY, SMITH, STONE, STREITZ, THARP, WARNER, AND ZIRBES, ASSOCIATE PROFESSORS BENNETT, BURR, EBERHART, GRIFFIN, HARDING, KIRCHER, AND MENDENHALL, ASSISTANT PROFESSOR MR. HAW, MR. HUNT, MISS WELLS, AND ASSISTANTS

Courses listed in the Department of Education include those previously offered by the Departments of Adult Education, History of Education, Practical Arts and Vocational Education, Principles and Practice of Education, and School Administration.

Courses in the Department of Education are arranged under the following headings:

General and Basic, Philosophy of Education, History of Education and Comparative Education, Elementary Education, Secondary Education, Higher Education and Teacher Training, Industrial Arts, Vocational Trades and Industries, Business Education, Superintendency, Guidance and Special and Adult Education.

All of these except the first represent areas of specialization within the Department of Education.

AREAS

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NOTE: Attention is called to the service course (Psychology 680) offered for those majoring in Elementary or Secondary Education or the Superintendency.

GENERAL AND BASIC

NOTE: For Introductory Survey in Education, see Courses of General Interest, Survey 407, page 104.

*502. Interpretation of Field Experience in Schools. Two credit hours. Autumn Quarter. Prerequisite, Education Survey 407 and approval of Director of Field Service. Mr. Heck.

Designed particularly to capitalize upon the results of the experiences of students in full-time participation in schools during September.

* Not given in 1947-1948.

505. Field Service Projects in Education. Two to fifteen credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, permission of the Director of Field Service and definite arrangement for sponsorship and supervision by an instructor. Registration may be for full-time work for an entire Quarter with credit for fifteen hours, or for part-time work with less credit in one or more Quarters; however, anyone who expects to take more than seven hours in student teaching, Education 518, 520, 536, should bear in mind that not more than a total of twenty-two hours may be accumulated under this course and the above indicated student-teaching courses combined.

This course is to provide opportunity for practical field experiences in public and private social agencies and in schools. Registrants are placed in responsible positions in the field and required to attend a conference group each week. The field service will be integrated with professional courses in the College of Education in an effort to increase the student's understanding of problems in education and his facility in meeting them effectively.

Both group work and case work are involved in this program. Students may conduct nutrition, first aid, health, Americanization classes and other similar activities. A prospectus of typical projects which students may undertake is obtainable along with the appropriate application form in the office of the Director of Field Service, 103 Arps Hall.

Students enrolling for this course may spend one full Quarter off the campus or a part of each school day or week in active service. In each case the activities must be carefully planned by the student and supervised by a member of the University staff. The course will include a final written evaluation of the field experiences.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

600. Minor Problems. One to four credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, junior standing in the College of Education and twenty credit hours in education and allied subjects of which ten approved by the instructor must be in education.

Students may, with the approval of their advisers, register for more than one section of Education 600 or for the same section two or more times. Hours to be arranged with instructor.

By permission of the Chairman of the Department and the Director of the Bureau of Educational Research, students enrolled in this course may obtain credit for research work done under members of the Bureau staff.

- (a) Business Education.
- (c) Elementary Education. Miss Zirbes, Miss Streitz, Mr. Burr, Mr. Harding.
- (d) Guidance. Mr. Smith, Mr. Anderson, Mr. Heck, Mr. Bennett, Mr. Mooney.
- (e) Higher Education. Mr. Anderson, Mr. Hullfish, Mr. Rath.
- (f) History of Education and Comparative Education. Mr. Good, Mr. Eckelberry.
- (g) Industrial Arts Education. Mr. Smith, Mr. Haws.
- (h) Industrial-Vocational Education. Mr. Smith.
- (i) Philosophy of Education. Mr. Hullfish, Mr. Kircher.
- (j) Radio Education. Mr. Tyler.
- (k) Secondary Education. Mr. Alberty, Mr. Eikenberry, Mr. Eckelberry.
- (l) Special and Adult Education. Mr. Heck, Mr. Nisonger, Miss Rosebrook, Miss Sanderson.
- (m) Superintendency. Mr. Lewis, Mr. Reeder, Mr. Heck, Mr. Bennett.
- (n) Teaching of English. Mr. Seely, Mr. Eberhart.
- (o) Teaching of Foreign Languages. Mr. Tharp.
- (p) Teaching of Mathematics. Mr. Fawcett.
- (q) Teaching of Sciences. Mr. Cahoon, Mr. Haub.
- (r) Teaching of Social Studies. Mr. Landsittel, Mr. Griffin, Mr. Hunt.
- (s) Visual Education. Mr. Dale.
- (t) Library Science. Miss Heller.

601. Radio in Education. Three credit hours. Winter Quarter. Prerequisite, senior standing and, for undergraduates, Arts Survey 405. Mr. Tyler.

Radio's role in education in and out of school, including planning and preparation of programs, use of programs, and evaluation. Opportunities for observation and individual problems.

602. Visual Education. Three credit hours. Winter Quarter. Prerequisite, senior standing. Mr. Dale.

A consideration of the role of visual instruction in education; intensive study of the contribution of visual materials to educational objectives with especial attention to the research

literature. Educational principles to be followed in the utilization of visual materials will be analyzed. Standards for evaluation will be critically examined.

***790. An Overview of Education.** Three credit hours. Autumn Quarter. Open only to teachers of experience. Advanced undergraduate students may be admitted by permission of the instructor. Mr. Mendenhall and staff of the Department of Education.

A consideration of major problems and issues in education today, an overview of the contributions of representative fields of learning to the general education of students, and an inquiry into the types of elementary, secondary, and teacher-education programs necessitated by the times in which we live. The course consists of a series of lectures, discussions, and demonstrations under the direction of specialists in the College of Education, together with related investigations carried on by the student.

WORKSHOP

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

625. Field Laboratory Workshop. Three credit hours. Autumn, Winter, and Spring Quarters. May be taken for not more than three Quarters with a maximum credit of nine hours.† One two-hour workshop meeting each week in addition to individual conferences and supervised experimentation. Conferences, observations, and committee reports. Workshops will be conducted in the schools or school centers for which workshops are authorized. Open to teachers, administrators, and supervisors with junior standing or above, who, in the judgment of the committee on workshops, have an educational background in the subject matter of the workshop which will serve as an adequate base for intensive work in this field. Such persons must have the recommendation of the school system or systems in which the workshop is conducted, as well as that of the college staff member directing the workshop.

Graduate students must demonstrate satisfactory ability to deal critically and constructively with a phase of the total problem approved by the workshop director as appropriate for graduate study, and must submit individual papers covering in detail their contribution to the total workshop problem.

Application for a Field Laboratory Workshop should be made to the Chairman of the Department of Education at least one month prior to the opening of the Quarter in which it is desired to conduct the workshop. Each workshop will be concerned with a problem arising in a local school system in Ohio, the solution of which has educational significance also to other school systems in the state or nation. In the attack on such problems, individual members of the workshop will study and experiment with respect to their special fields as they relate to the total problem. Students registered for the course will be required to submit individual papers covering in detail their contributions to the total workshop problem. Graduate students must demonstrate satisfactory ability to deal critically and constructively with a phase of the total problem approved by the workshop director as appropriate for graduate study. The workshop group will be required to prepare, under the supervision of the workshop director, a written report which includes a statement of the problem attacked, the procedures used, the results obtained, and such other information as may be useful in dealing with a similar problem in other countries.

†626. Education Workshop. Eight credit hours for six-week workshops, four credit hours for three-week workshop. Maximum credit twelve hours.* Full time of students required, therefore registrants not permitted to take other University work concurrently. Open only to experienced teachers, administrators, and supervisors with junior standing or above who, in the judgment of the committee on workshops, have an educational background in the subject matter of the workshop which will serve as an adequate base for intensive work in this field.

Graduate students must demonstrate satisfactory ability to deal critically and constructively with a phase of the total problem approved by the workshop director as appropriate for graduate study and must submit individual papers covering in detail their contribution to the total workshop problem.

Education workshops will be arranged upon application of twenty enrollees, provided appropriate faculty staffing is available.

The Education Workshop brings together from a variety of schools persons of similar or

† Not given during the academic year, 1947-1948.

* Maximum credit allowed for campus and field workshops is twelve hours.

* Not given in 1947-1948.

closely related specialized interests. In the Workshop they will pool their practical experience and the results of their local experimentation and will systematize and relate this knowledge through intensive study of the literature of the field. The primary purpose will be that of developing sound principles and procedures with respect to professional work in the specific field.

PHILOSOPHY OF EDUCATION

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

607. Philosophy of Education. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, senior standing in teacher education curricula. Open to other senior students and to graduate students only on permission of the instructor. Required of all candidates for the degree Bachelor of Science in Education except that it is open to, but not required of, students who have credit for Education 501 (not to be confused with Education Survey 501). Mr. Hullfish, Mr. Kircher.

A consideration of the distinctive function or purpose of education in the social order and the bearing of this purpose on problems of organization and administration, the selection of subject matter, and classroom procedures.

624. Social Education. Three credit hours. Spring Quarter. Lectures and discussions. Enrollment limited to those with at least junior standing or the equivalent. Mrs. Robbins.

Case studies of community schools; school uses of community resources in curriculum and public interpretation; problems in adapting school to community; the teacher's community contacts.

757. Conceptions of Mind in Educational Theory. Three credit hours. Autumn Quarter. Prerequisite, senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Hullfish.

A study of the doctrines of mind that have exercised a determining influence upon educational theory and practice.

Not open to students who have credit for 610.

758. The Thinking Process in Its Educational Bearings. Three credit hours. Spring Quarter. Prerequisite, senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Hullfish.

A study of the thinking process for the purpose of tracing its implications for educational theory and classroom practice.

Not open to students who have credit for 611.

759. Modern Trends in Educational Philosophy. Three credit hours. Winter Quarter. Prerequisite, senior standing in the College of Education or twenty-five Quarter hours in educational subjects, philosophy, or psychology. Mr. Kircher.

A discussion of current educational doctrines and controversies, in the light of their historic background and their philosophical implications.

Not open to students who have credit for 617.

760. Moral Ideals in Education. Three credit hours. Spring Quarter. Prerequisite, senior standing in the College of Education, or twenty-five Quarter hours in educational subjects, philosophy or psychology. Mr. Kircher.

A consideration of types of moral ideals, of the relation of moral values to school subjects, and of the question of direct and systematic moral instruction in the schools.

Not open to students who have credit for 620.

HISTORY OF EDUCATION AND COMPARATIVE EDUCATION

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

632. The History of Modern Education. Five credit hours. One Quarter. Autumn, Winter, Spring. Required in the College of Education except for students preparing for service in elementary schools. Prerequisite, junior standing. Mr. Good, Mr. Grim.

Not open to students who have credit for Education 507.

635. The Evolution of Educational Thought. Five credit hours. Spring Quarter. Given in alternate years. Prerequisite, junior standing in the College of Education and twenty hours in education and allied subjects of which ten must be in education including five in the history of education. Mr. Good.

A study from the sources of the great philosophers of education in relation to their times; and an evaluation of their influence on present educational thought and practice. The thought of the Greek, Roman, Renaissance, and the modern democratic and industrial thinkers will be studied.

†636. Evolution of American Education. Five credit hours. Prerequisite, Education 632 or its equivalent.

After a brief survey of the colonial beginnings, emphasis will be laid upon the early national period, the expansion after the Civil War, and the reconstruction of American education since 1900. Study of original sources. The evolution of elementary, secondary, and higher education.

***638. Comparative Education.** Three credit hours. Mr. Good, Mr. Eckelberry.

This course provides a general introduction to the comparative study of education. It will include the study of schools and other educational agencies in several selected countries, including the United States, and their relations to the social and political institutions of the countries involved. Typical subjects will be: educational organization, the extent of educational opportunity, curricula, methods of teaching, measures to promote child welfare in and out of school, and the relation of these to the total culture of the countries studied.

639. Great Teachers. Two credit hours. Autumn Quarter. Two lectures each week. Prerequisite, junior standing in the College of Education and twenty hours in education and allied subjects of which ten must be in education. Mr. Good.

Study of the times, personalities, and work of several eminent teachers: Socrates, Plato, Jesus, Quintilian, Agassiz, Arnold, and others.

640. Foreign Educational Systems. Three credit hours. Autumn Quarter. Mr. Grim.

The educational system and culture of a foreign country or those of a group of related countries will be studied intensively as an aid to international understanding and in preparation for educational service at home and abroad. Educational organization and education as a factor in public policy will be emphasized. The countries or regions to be studied will be varied from Quarter to Quarter.

641. History of Vocational Education and the Practical Arts. Three credit hours. Autumn Quarter. Prerequisite, junior standing in the College of Education or in the Department of Agricultural Education or in Home Economics, and twenty hours in education and allied subjects of which ten must be in the College of Education or the teaching courses in Agriculture or Home Economics. Mr. Warner and others.

The history and theory of activities related to agriculture, business, industry, and home making as a part of education, and their relation to the general theory and practice of education.

642. History of Physical and Health Education. Three credit hours. Spring Quarter. Prerequisite, junior standing in the College of Education, or

* Not given in 1947-1948.

† Not given during the academic year, 1947-1948.

the Department of Physical Education and twenty hours in education and allied subjects of which ten must be in education or in physical education. Mr. Daniels.

An historical survey of physical and health education beginning with the physical education of ancient Greece, with special emphasis on recent and contemporary developments in Europe and America.

ELEMENTARY EDUCATION

509. Kindergarten and Pre-school Teaching. Three credit hours. Spring Quarter. Three class meetings and two laboratory periods each week. Prerequisite, Education 514 or the equivalent.

In this course students who are especially interested in early childhood are acquainted with recent developments in the education of young children and with their bearing on the selection and guidance of appropriate activities.

510. Theory and Practice in Elementary Education: Arithmetic. Three credit hours. Autumn and Winter Quarters. Mr. Harding.

This course is designed for prospective teachers in kindergarten and the elementary school. It is devoted to the study of materials and methods of teaching arithmetic, with emphasis upon the development of functional programs of instruction in relation to the other subject areas. Diagnostic and remedial work are included.

513. Pupil Personnel in Elementary Education. Four credit hours. Winter Quarter. Lectures, discussions, observation, and laboratory work on the elementary school level. Required of all students preparing for elementary school teaching. Mr. Heck.

Importance of knowledge of individual in modern education; social responsibility for individual guidance; means of knowing the child through measurement, case study, and records; ways and means of effectively recording data; critical study of record forms; constructive use of data. Study of work of visiting teacher, child guidance clinic, vocational counselor.

514. Contemporary Practice in Elementary Education: Conceptions of Teaching. Four credit hours. One Quarter. Winter and Spring. Not open to freshmen. Miss Zirbes.

This is the first of the basic courses in the professional sequence required in the elementary curriculum. It deals with the problems of the modern teacher at the various levels of childhood education. It provides opportunities for school service and utilizes these to sensitize students to the responsibilities and resources with which prospective teachers must become familiar in meeting the needs of children. Visits to schools and discussions of problems at various levels from kindergarten through sixth grade are utilized and related to readings from professional literature in order that students may broaden and deepen their conceptions of teaching. Two open hours each week must be reserved for school visits and laboratory work of a practical nature.

NOTE: The basic professional sequence in the elementary education curriculum consists of Education 514, 515, 516, 517, 518, and 519. It provides an integrated intensive consideration of materials formerly presented separately in courses in special methods, observation, participation, and student teaching. It relates all these matters to the sciences upon which educational premises and practices are based in a way which develops professional insight and resourcefulness. Transfer students who have credit for special methods courses taken elsewhere should confer with advisers in the elementary area as early as possible concerning the completion of sequence requirements.

515. Theory and Practice in Elementary Education: Child Guidance. Four credit hours. One Quarter. Autumn and Winter. Prerequisite, Education 514. Open only to students in the College of Education. Miss Streitz.

This course is chiefly concerned with the teacher's insight and understanding of approved practices in the development and education of children. Significant research provides the basis for class work. Systematic observations of children both as individuals and in groups at the University School supplements class discussion. Readings and reports are required. Students will have opportunity for direct experiences with children in a variety of activities.

516. Theory and Practice in Elementary Education: The Language Arts. Four credit hours. One Quarter. Autumn and Winter. Prerequisite, Education 515. Open only to students in the College of Education. Mr. Harding, Mr. Burr.

This course follows the sequential arrangement to the Elementary Education Curriculum, giving particular consideration to the place and function of the language arts in child development. It includes observation and participation in elementary school program, selected readings, discussion, and reports.

A laboratory fee of \$3.00 will be charged for teaching materials.

517. Theory and Practice in Elementary Education: The Social Studies. Four credit hours. One Quarter. Winter and Spring. Prerequisite, Education 515. Open only to students in the College of Education. Education 515, 516, and 517 should be taken in sequence and must precede Education 518. Education 518 and 519 should be taken the senior year. These courses all are required of all students who plan to teach in the kindergarten or grades of the elementary school.

This course follows the sequential arrangement of the Elementary Education curriculum, placing particular emphasis upon the social studies in the elementary school program. It involves a study by prospective elementary school teachers of experiences which will help children understand basic social functions, with emphasis upon the organization of these experiences about broad units of work. Consideration is given to the importance of, and the problems involved in providing for democratic living in the elementary school.

518. Theory and Practice in Elementary Education: Student Teaching. Five or ten credit hours. One Quarter. Autumn, Winter, Spring. Reserve entire forenoon daily and hours four to six each Tuesday. Maximum number of hours which will be accepted as transfer credit from other colleges is five hours. Students with transfer credit in Education 518 will register for not less than five hours. Students without credit in student teaching will register for ten hours.

Prerequisites are as follows: All required Education courses except Education 519, which may be taken concurrently or following Education 518; Fine Arts 569, Music 546, 547, and 548; Physical Education 476; Psychology 407; ten hours of Sociology. Open only to students in the College of Education. Mr. Harding, Mr. Burr, Mr. Jacobs.

NOTE: For all students in the elementary education curriculum, an average point-hour ratio of 2.25 on all professional courses taken at this University will be required for admission to Education 518. These courses are those listed above as prerequisites. Students should register for student teaching upon attaining cumulative credit of one-hundred twenty Quarter hours.

519. Theory and Practice in Elementary Education: Curriculum Organization. Two credit hours. One Quarter. Autumn and Spring. Prerequisite, the same as for Education 518. Open only to students in the College of Education. Miss Strietz, Miss Zirbes.

The central purpose of this course is to organize and integrate the materials and experiences provided by the curriculum, in preparation for teaching in the kindergarten or grades of elementary school.

520. Supervised Student Teaching of Music in Elementary Schools. Three credit hours. One Quarter. Autumn, Winter, Spring. This course should be taken by all students specializing in music to satisfy the College of Education requirements listed under Education 536. Prerequisite, Music 440, 523, and 623, fulfillment of requirement in piano and voice, and an average point-hour ratio of 2.25 in music. Miss Thomas, Miss Dierker.

Section (a) Three credit hours. For student teaching in instrumental music. Required in Music Curricula II and III. Mr. McBride.

Section (b) Three credit hours. For students teaching in vocal music. Required in Music Curricula I and III. Mr. Leeder.

NOTE: The point-hour ratio of 2.25 in the teaching field is based upon all courses in music taken at this University. Students transferring from other institutions and requesting credit for Education 520 will be required to fulfill the 2.25 point-hour ratio before such credits shall be granted.

521. Children's Literature. Three credit hours. One Quarter. Autumn and Spring. Miss Streitz, Mr. Jacobs.

A study from the literary and educational points of view of the best literature for elementary school children. Folk literature, fiction, poetry, drama, and subject matter books. Emphasis on development of standards for selecting materials with reference to the interests, needs, and abilities of children at different age levels.

522. Industrial Arts Laboratory for Teachers in Elementary Schools. Five credit hours. One Quarter. Autumn and Spring. Two three-hour periods

each week for lecture and laboratory. Education 522 required of majors in elementary education. Mr. Warner and assistants.

Laboratory experience involving the use of tools and materials which enter into an activity curriculum in elementary schools. These activities deal with materials, processes, and products through which society supplies its needs for food, clothing, shelter, utensils, records, and transportation.

528. Theory and Practice in Elementary Education: Nature Study and Science. Three credit hours. One Quarter. Autumn and Winter. Prerequisite, ten hours of biological science and junior standing in the College of Education.

Closely related to the other sequence courses in the Elementary Education curriculum (for explanation, see Education 514), this course considers the relationships between nature, environment, and elementary science in their role in childhood education. Possible resources and ways and means teachers and pupils may use them in the school program.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

654. Mathematics in Elementary Education. Three credit hours. Autumn Quarter. Prerequisite, fifteen hours of education including Education 514. Mr. Harding.

A study of the development and educative functions of arithmetic and other branches of mathematics in the elementary school. Considers the influence of scientific studies upon the several theories of teaching, the principles upon which they are based, the selection and arrangements of material, development of courses of study, and the improvement of current educational practice. The emphasis throughout is upon the development of mathematical thinking.

Not open to students who are pursuing the curriculum for elementary teachers except by special permission of the departmental adviser.

Not open to students who have credit for Education 510.

656. Language and Reading in the Elementary School. Three credit hours. Autumn Quarter. Prerequisite, fifteen hours of education including Education 514.

A consideration of modern trends in the teaching of reading, study habits, oral language, composition, writing, and spelling involving a study of the practical bearings of investigation and progressive theory on the improvement of current practice in the teaching of all phases of English in the elementary school. The organization and administration of functional language arts programs.

Not open to students who are pursuing the curriculum for elementary teachers except by special permission of the departmental adviser.

Not open to students who have credit for Education 511.

657. Teaching the Social Studies in the Elementary School. Three credit hours. Spring Quarter. Prerequisite, fifteen hours of education including Education 514. Mr. Burr.

This course considers the educational values of the social studies, reasons for, and ways and means of integrating history, geography, and civics, and the development of pupils of appropriate emotional and thought reactions to social problems and issues. Opportunity is afforded for observation in the University Elementary School.

Not open to students who are pursuing the curriculum for elementary teachers except by special permission of the departmental adviser.

Not open to students who have credit for Education 512.

661. Problems of Elementary Teachers in Service. Two credit hours. Autumn Quarter. Participation in special projects and investigations, with reports. Open to graduate students by permission of the instructor, to principals and teachers in service who have junior standing in the College of Education and who have twenty Quarter hours credit in education. Mr. Burr.

The work will center about ways and means of improving instruction through actual attack on selected classroom problems.

664. Health Education for Teachers. Three credit hours. Autumn Quarter.

Three lecture periods each week. Required in the curriculum for Elementary Teachers. Prerequisite, junior standing. Mr. Cushman.

A consideration of the teacher's responsibility for practicing and maintaining high standards of personal hygiene and health, and a first hand study of the environmental and social conditions and problems of community health.

665. Aviation Education for Elementary and Secondary School Teachers. Three credit hours. Winter Quarter. Flights, field trips, lectures, demonstrations, laboratory work. Prerequisite, teaching experience in elementary or secondary school, or undergraduates who have completed the general and special methods courses.

Emphasis will be placed upon those phases of aeronautics which may be used to enrich present programs in elementary and secondary schools. Particular attention will be given to materials and techniques appropriate to such fields as geography, social studies, practical arts, mathematics, and science, applicable to both elementary and secondary levels. Activities will be provided relating to meteorological elements and their measurement, air masses and air fronts, weather maps and forecasting, navigation maps, charts and projections, elementary astronomy, piloting and dead reckoning, theory of flight, elementary radio navigation, traffic control, civil air regulations, and social and economic implications of the air age. Field trips will be made to airports and several flights planned to demonstrate principles and procedures discussed in the laboratory will be taken.

Not open for graduate credit. Not open to students who have credit for Education Survey 502 (General Aviation Survey).

SECONDARY EDUCATION

533. The Theory and Practices in Secondary School Teaching. Four credit hours. One Quarter. Autumn, Winter, Spring. Lectures, discussions, and observations of classroom activities on the secondary school level. Required of all students preparing for secondary school teaching. Prerequisite, Psychology 407. Mr. Mendenhall and Staff.

A study of the secondary school in the light of its historical development, the procedures for providing for individual differences among pupils, the organization of instructional materials, classroom management, general methods, and the planning for pupils activities; also a critical evaluation of current principles and procedures.

534. The Theory and Practices in Secondary School Teaching (Continued). Four credit hours. One Quarter. Autumn, Winter, Spring. Lectures, discussions, and observations of classroom activities on the secondary school level. Required of all students preparing for secondary school teaching. Prerequisite, Education 533. Mr. Lewis, Mr. Heck, Mr. Reeder.

This course is based on the principles developed in Education 533 and consists generally of a study of the place of extra-curricular activities in the school program, guidance and school control, measurement, records, and reports; also a study and evaluation of current principles and procedures.

536. Student Teaching in Secondary Schools. Three to fifteen credit hours. Autumn, Winter, and Spring Quarters by special permission of the Director of Field Service. A minimum of seven credit hours is required. Students will determine by consultation with area advisers and the Director of Student Teaching the number of credit hours for which registration is to be made. The initial registration may be for the minimum of three credit hours or more, and the registration may be repeated in subsequent Quarters until the maximum of fifteen credit hours has been accumulated. In no case shall accumulation of credit hours in excess of twenty-two under the heads of Education 505 and Education 536 be permitted. Open only to students in the College of Education. Mr. Landsittel and others.

Observation, participation, responsible teaching, individual and group conferences.

Application. To obtain admission to any of the sections of this course as indicated below, students must file applications in the last Quarter of their third year. Blanks for the purpose are procurable in the office of the Director of Field Service, Room 103, Arps Hall, where the applications are filed.

Placements. Similarly at the time of registration for any section of the course, placement cards (blanks procurable in Room 103, Arps Hall) must be filled out. Schedules in which Education 536 appears will not be approved by the Secretary of the College until placement cards have been filled out.

The prerequisites to the course, any section, are as indicated below:

1. Senior standing in the College of Education.
 2. Education 533 is prerequisite in the cases of all students pursuing the general, the business, the industrial arts, the home economics, the nursing, the physical education, or the fine arts curriculum.
 3. Completion of at least 75 per cent, in terms of aggregate credit hours, of the courses prescribed as subject matter preparation in the chosen teaching field or fields in which student teaching is contemplated.
 4. A point-hour ratio of 2.25 in each of the required teaching fields (majors and minors), is required regardless of the subject-matter area in which student teaching is contemplated. Students transferring from another College of the University to the College of Education must fulfill the 2.25 point-hour ratio on all courses in their respective teaching fields, regardless of whether such courses were taken before or after transfer. Transfer students coming from other institutions and requesting credit in student teaching will be required to fulfill the 2.25 point-hour ratio before such credit shall be granted. Only credits earned in this University will be taken into account in computing point-hour ratios.
 5. In the fields of French, Spanish and German general prerequisites are the courses in Pronunciation and in Syntax and in at least six hours of Advanced Conversation, all at 500 or 600 levels, or the equivalents as determined by the supervisor of these fields. (See page 58.)
 6. Appropriate methods courses are prerequisite, except that in certain cases (See pp. 138-145) they may be taken concurrently with student teaching in the same teaching field or fields.
- Section (a). Four credit hours. For student teaching in instrumental music. Continuation of Education 520a. Required in Music Curricula II and III.
- Section (b). Four credit hours. For student teaching in vocal music. Continuation of Education 520b. Required in Music Curricula I and III.
- Since Education 536 is not offered in the Winter Quarter in certain fields, students planning to enroll in the Winter Quarter should consult the Director of Field Service.

537. Supervised Practice in Specialized Forms of Education. Seven credit hours. Autumn, Winter, and Spring Quarters. Open by special permission of the Director of Field service, only to students in the College of Education. Prerequisites as set forth in Paragraphs 1, 2, 3, and 4 under the head of prerequisites for Education 536 above. Mr. Landsittel and others.

Observation, participation, and responsible leadership of pupil groups in one or more of the following forms of educational work: Dental hygiene, nursing education, and psychological counselling.

Applications and placements as in Education 536.

540. Problems in the Teaching of Biological Science. Three credit hours. Autumn Quarter. Two one and one-half hour periods each week. Prerequisite, twenty hours of biological science. Recommended for students who expect to teach biological science or general science. Mr. Haub, Mr. Taft.

A course for teachers designed to give them first-hand experience in planning field work; collecting materials for class use; rearing of collected organisms; preserving specimens for class or museum; using of simple apparatus and devices in demonstrations; and ways of equipping a biology room at little cost.

541. Language-Composition Materials for High School Teachers. Three credit hours. Winter Quarter. Lectures, readings, oral and written composition experiences. Recommended for all English majors and minors and open to all prospective high-school teachers. Prerequisite, English 401, 430.

The purpose of the course is three-fold. (1) to enable students further to master the fundamental principles of language usage commonly included in the secondary-school curriculum; (2) to acquaint them with language source materials; (3) to enable them to secure some experience in the language activities peculiar to the work of the high-school teacher.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

665. Aviation Education for Elementary and Secondary School Teachers. (For description see 665 under Elementary Education.)

Not open to students who have credit for Education Survey 502 (General Aviation Survey).

668. Methods and Techniques in Speech and Hearing Therapy. Five credit hours. Autumn Quarter. Prerequisite, Education 533, 514, and twenty hours in speech correction. Miss Sanderson.

This course is designed for teachers of speech and hearing therapy, who wish to organize and administer effective programs of work in the public schools. Careful study will be made of equipment and materials important in furthering diagnosis and therapy of speech disorders, and of community agencies and resources which can serve as valuable aids in the program. Participation in field service is an essential in this course.

669. Literary Materials for English and the Social Studies. Three credit hours. Autumn Quarter. Lectures, readings, and problem assignments. Recommended for students planning to teach English, history, or social studies in junior or senior high schools.

The course is designed (1) to acquaint English teachers with a wide variety of novels, short stories, poems, plays, biographies, and essays which are especially suitable for pupils in junior and senior high school, and (2) to familiarize teachers of history and social studies with literary selections which serve to illuminate typical subjects of study in these fields. Consideration will be given to standards for the selection of literary materials and the use of those materials and the secondary school curriculum.

Not open for graduate credit.

670. Teaching Literature in the High School. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lectures each week: observations. Required of students majoring or minoring in English who have reached the third Quarter of their junior year. Prerequisite, six Quarters in English and Education 533, the latter of which, however, may be offered concurrently with Education 670. Either Education 670 or 671 must precede supervised teaching in English, but the other may be carried concurrently with supervised teaching. Mr. Seely.

Emphasis will fall upon the selection of suitable poetry, drama, prose-fiction, etc., for junior and senior high-school pupils; developing methods for their presentation and study; and suggesting means for correlating the work in literature with the other high-school studies.

Not open during Summer Quarters to undergraduate students who have had no teaching experience.

671. Teaching Composition in High School. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lectures each week: observations. Required of students majoring or minoring in English who have reached the third Quarter of their junior year. Prerequisite, twenty hours in English and Education 533, the latter of which, however, may be offered concurrently with Education 671. Either Education 670 or 671 must precede supervised teaching in English, but the other may be carried concurrently with supervised teaching. Mr. Seely.

This course will be devoted to the discussion of the methods of teaching grammar and composition, and to means of developing originality, imagination, and individuality in the oral and written expression of high-school pupils.

Not open during Summer Quarters to undergraduate students who have had no teaching experience.

***672. Teaching Composition in High School.** Three credit hours. Lectures, conferences, readings. This course is the more advanced part of Education 671 (offered during the year). It may be elected by teachers and other persons of maturity who are not required to elect all of Education 671. (Students who will do practice teaching in English may not elect this course since they will elect Education 671 during the Autumn or Spring Quarter).

This course will be devoted to the materials and methods of teaching the language fundamentals, oral composition, and written composition.

†674. The Supervision of Journalism in Secondary Schools. Three credit hours. Prerequisite, Education 533 and permission of the instructor.

This course is designed for persons who have been teaching journalism in secondary schools, or who act as faculty advisers for school newspapers, magazines, or annuals. It includes a gen-

* Not given in 1947-1948.

† Not given during the academic year. 1947-1948.

eral survey of the editorial, publishing, and mechanical phases of school newspapers and other publications with emphasis on those aspects which are of particular value to teachers.

Not open to students who have credit for Education 546.

Not open for graduate credit to graduate students majoring in journalism.

675. The Teaching of Speech. Five credit hours. One Quarter. Autumn and Winter. Prerequisite, Education 533 and twenty hours in speech. Miss Sanderson.

This course is designed for prospective teachers of speech in junior and senior high schools. It includes a study of the purposes and procedures used in teaching public speaking in secondary schools; consideration of the place and potentialities of educational dramatics and out-of-class school plays. Emphasis is placed upon the use of auditory aids and available materials. The speech teacher's responsibility for the establishment and management of speech clinics is considered.

Necessary classroom, school, and library equipment for the teaching of speech and evaluation of texts in speech receive attention.

676. Teaching in the Core Program in the Secondary School. Three credit hours. Spring Quarter. Mr. Alberty and others.

A course for prospective teachers and teachers in service who are interested in learning how to work effectively in schools which utilize the core curriculum type of organization. A critical study will be made of current practices in the field through analysis of existing curriculums and procedures and through observations of and participation in the core program of the University School. Careful consideration will be given to the technique of selecting and organizing course materials and to the co-operative planning of units of work. The group will undertake building at least one resource unit.

677. The Teaching of the Social Studies, I. Five credit hours. One Quarter. Autumn, Winter, and Spring. Five lectures each week: observations. Open to Juniors and Seniors specializing in the social studies and, with the permission of the instructor, to other properly qualified students. Required for those who intend to complete a teaching major in the social studies. Prerequisite, twenty hours in the social studies and Education 533 or its equivalent. Mr. Griffin.

An examination of different theories of the role of social studies materials within the learning process, with particular attention to the impact upon the beliefs, attitudes, and values of secondary school students. Illustrative materials will be drawn primarily from history, economics, and sociology, with some attention to geography, anthropology, and political science. Special emphasis is given to the use of social studies materials in clarifying the contrast between authoritarianism and democracy, to the function of information within the reflective process, and to the possible contribution of the social studies teacher within the core curriculum.

NOTE: Normally this course should precede student teaching, but with the consent of the instructor it may be taken concurrently.

678. The Teaching of the Social Studies, II. Three credit hours. One Quarter. Autumn, Winter, and Spring. Lectures, discussions, observations. Open to Juniors and Seniors majoring in the social studies and, with permission of the instructor, to other properly qualified students. Required of all who intend to complete a teaching major in the social studies. Prerequisite, twenty hours in the social studies and Education 533 or its equivalent. Mr. Griffin.

A continuation of Education 677. The purpose of the course is further to exemplify concretely the principles developed in Education 677, and to help the student to develop enriching materials specifically related to the class or classes he is teaching. Self-directing group work under proper leadership is the type of classroom procedure throughout. Observation of teaching in secondary schools is involved.

NOTE: Normally this course should precede student teaching, but with the consent of the instructor it may be taken concurrently.

680. Science Materials for Junior and Senior High Schools. Three credit hours. Spring Quarter. Lectures, readings, problem assignments and participation in the University School science classes. Recommended for students specializing in physical or general science in the College of Education. Prerequisite, a major or minor in science and Education 684, or the equivalent. Mr. Cahoon and science staff of the University School.

Planned to give teachers of junior and senior high school science contact with important teaching materials and sources. Emphasis will be placed upon such topics as planning and use

of materials, key sources, visual and audio aids, materials for teaching scientific thinking and tests and evaluation instruments. Students will be expected to collect, construct and organize materials for use in their own science classes.

Not open to students who have credit for Education 538.

681. Laboratory Practicum for Teachers of Science. Two to five credit hours. Education 681 may be taken more than once provided the total credit received for Education 681 (539) does not exceed five Quarter hours. Winter Quarter. Demonstrations, laboratory work, construction of apparatus, participation in science classes in the University School. Prerequisite, Education 683 or 684 or equivalent, and major or minor in one or more of the following physics, chemistry, physics-chemistry, general science, biology. Mr. Cahoon and the science staff of the University School.

Students will have experience in working with such techniques as glass blowing, wood and metal working, chemical techniques, electrical circuits and devices, and photographic and visual aids as related to apparatus materials and tools used in science courses in secondary and elementary schools. Students will make use of these techniques in assembling and constructing demonstration and laboratory apparatus for use in various science courses. Techniques and projects will be adapted to the needs and interests of individual students or teachers.

†682. Field Laboratory in Conservation Education. Six to eight credit hours. Prerequisite, senior standing and twenty hours in Education, including Education 528 or 684 or equivalent or enrollment in the conservation curriculum of the College of Agriculture.

This course is primarily designed for teachers in elementary and secondary schools and is conducted from Camp Muskingum near Carrollton, Ohio. It will employ the entire time of the student. Field observations, laboratory demonstration, group discussions, and lectures concerning curriculum and methods of teaching in the fields of conservation of soils, wild life, and other resources will be conducted.

683. The Teaching of Biology. Three credit hours. Spring Quarter. Three recitations each week: observations. Required of all students specializing in biology in the College of Education. Prerequisite or concurrent, Education 533; prerequisite, Botany 401-402, Zoology 401-402, and at least two additional Quarters of some biological subject. Mr. Haub, Mr. Taft.

This course is given primarily for the students in the College of Education who expect to teach high school biology. The work will include lectures and demonstrations by the students of the best methods of presenting botany, zoology, and biology to high school students.

684. The Teaching of General and Physical Science. Three credit hours. Autumn Quarter. Lectures, readings, observations and participation in the University School science classes. Required of students specializing in physical or general science in the College of Education. Prerequisite or concurrent, Education 533 and a major or minor in physics, chemistry, physics-chemistry, astronomy, or general science. Mr. Cahoon and science staff of University School.

A study of the problems and techniques in the teaching of general and physical science courses in junior and senior high schools. Objectives, planning, use of demonstrations and laboratory experiments, texts and reference materials, pupil projects, trips, teaching and evaluating scientific thinking, directed study, visual aids, professional literature.

685. The Teaching of Nursing. Three credit hours. Winter Quarter. Prerequisite or concurrent, Education 533 and junior or senior standing in the College of Education. Miss McKenna.

Objectives and methods, selection of materials, classroom procedures, readings, discussions, and reports.

686. The Curriculum in Schools of Nursing. Three credit hours. Winter Quarter. Miss McKenna.

Consideration is given to the philosophy and purpose of the curriculum for Schools of Nursing as set forth in "A Curriculum Guide for Schools of Nursing."

A study of the interrelation between theory and practice; length and placement of courses;

† Not given during the academic year, 1947-1948.

problems pertaining to the planning of the class schedule in the light of given known situations; responsibilities of teaching personnel; class load and physical facilities, such as classrooms, laboratories and library.

NOTE: For course in Supervised Teaching in Nursing, see the Department of Nursing, Course 661.

687. Teaching of Mathematics in Secondary Schools. Five credit hours. Three lectures each week with observation and active participation in secondary school mathematics classes. Required of students in the College of Education who intend to complete a teaching major in Mathematics. Mr. Kinsella and the mathematics staff of the University School.

A consideration of the role of mathematics in general education and the relation of mathematics to other fields of learning. The selection of concepts, understanding, appreciations and skills important for all secondary school pupils and a consideration of related teaching procedures. Selected topics will be presented as illustrative of modern teaching methods.

689. Field and Laboratory Work for Teachers of Mathematics. Three credit hours. Spring Quarter. Demonstrations, field work, projects, readings, laboratory work and participation in University School mathematics classes. Recommended for students in the College of Education who are majoring or minoring in mathematics. Prerequisite, a major or minor in mathematics and Education 687 or the equivalent. Mr. Fawcett and mathematics staff of the University School.

Actual experience with instruments and apparatus in field and laboratory work suitable for boys and girls in the junior and senior high schools. The use of devices and apparatus including the slide rule, the plane table, the alidade, the transit, the angle mirror, the sextant, the hypsometer and clinometer for teaching concepts and skills needed in elementary surveying and mapping. Field and laboratory work and demonstrations will be carried out illustrative of teaching procedures applicable to secondary school classes.

Not open to students who have credit for Education 544.

690. The Teaching of German. Three credit hours. Winter Quarter. Three recitations each week: observations. Required of all students who intend to complete a teaching major or minor in German. Prerequisite or concurrent, Education 533, and six Quarters of college German. Students must have reached the third Quarter of their junior year. Mr. Kramer.

Values. Critical study of objectives and methods. Textbook selection. Classroom procedures. Readings, discussions, and reports.

691. The Teaching of English as a Foreign Language. Three credit hours. Spring Quarter. Lectures, demonstrations, readings, observations. Open to Juniors or Seniors majoring or minoring in a modern foreign language and, permission of the instructor, to properly qualified students, such as mature, experienced teachers, or foreigners preparing to teach English to their own nationals. Mr. Tharp.

Problems and scope of teaching English to foreigners. English considered as a foreign language, materials and methods.

692. Methods and Techniques of Teaching Romance Languages. Five or seven credit hours. Autumn Quarter. Five meetings each week, combined and sectional: observations. Prerequisite or concurrent, Education 533 and admission to a major or minor in French or Spanish. Students must have reached the third Quarter of their junior year. Required of all students who intend to complete a teaching major in a Romance language. Mr. Tharp.

Lectures, readings, discussions, and conferences.

Values. Objectives. Demonstrations and lectures on methods of teaching reading, grammar and pronunciation. Textbook analysis. Professional advancement. Examinations and marking. Eight observations of high school classes required.

Sections. Techniques of instruction. The work of each section carries two hours of credit. and students may enroll in any sections for which they possess the prerequisites enumerated above.

Section A. French. Mr. Tharp.

Section B. Spanish. Mr. Tharp.

Lesson plans. Problems of presentation in the reading lesson, grammar, pronunciation. Construction of teaching materials. Choice of course content. Evaluation of classroom procedures.

NOTE: Students minoring in French or Spanish are expected to elect this course.

694. The Teaching of Latin. Three credit hours. Spring Quarter. Three recitations each week: observations. Required of all students who intend to complete a teaching major in Latin. Prerequisite or concurrent, Education 533, and six Quarters of college Latin. Students must have reached the third Quarter of their junior year. Mr. Hough.

Values. Teacher's equipment, objectives and methods. Classroom procedures. Lectures and assigned readings.

696. The Teaching of Mechanical Drawing I. Three credit hours. Autumn Quarter. Four two-hour laboratory periods each week: observations. Prerequisite, junior standing and twenty Quarter-credit hours in Fine Arts approved by the instructor, including Fine Arts 424 and 503 or equivalent or junior standing in Occupational Therapy. Mr. Shupe.

Objectives and methods in teaching the language of graphics, reading, visualizing and translating mechanical drawings. Freehand sketching and the use of instruments. Theory of shape description, orthographic and pictorial projection. Intersections and developments. Lettering.

697. The Teaching of Mechanical Drawing II. Three credit hours. Winter Quarter. Four two-hour laboratory periods each week: observations. Prerequisite, Education 696 or Engineering Drawing 401. Mr. Shupe.

Size description. Working drawings. Lettering. Methods of graphic reproduction. Drawing rooms and office equipment. Planning a secondary school course: content, arrangement, methods of presentation, standards, examinations and grading.

698. The Teaching of Mechanical Drawing IIa. Three credit hours. Spring Quarter. Four two-hour laboratory periods each week; observations. Required in Industrial Arts Education. Prerequisite, Engineering Drawing 401 and Education 533. Mr. Philby.

A study of objectives and methods. Planning a secondary school course, content, arrangement, demonstration methods and equipment, design of problems, examinations and grading. Modeling. Blackboard technique. Graphic reproduction. Correlation with other subjects.

699. Student Activities in the Secondary School. Three credit hours. Spring Quarter. Prerequisite, junior standing in the College of Education and twenty Quarter hours credit in education or allied subjects of which ten must be in education.

The place of 'extra-curricular' activities in the secondary school program. Consideration will be given to home-room activities, pupil participation in school government, assemblies, clubs, publications, debating and dramatics, athletics, honor societies, social activities, control of participation in activities, and financial administration of activities. Of special interest to high school teachers and high school principals.

706. Problems in Teaching and Supervising Science in the Junior and Senior High School. Four credit hours. Winter Quarter. Lectures, student reports, laboratory. Prerequisite, teaching or supervising experience or ten hours of graduate work in secondary or elementary education and Education 684 or 680. Mr. Cahoon.

Planned for teachers who are working with student teachers in their classes, or who expect to work with student teachers, and for those concerned with the supervision of teacher training programs in the science area. Objectives, curricula, recent trends, planning "lessons" and pupil experiences, techniques, classroom management, sources of teaching aids, evaluation of teaching, professional literature.

761. Materials for Teaching Secondary School Mathematics. Three credit hours. Winter Quarter. Lectures, problem assignments, readings, and participation in the University School mathematics classes. Recommended for students in the College of Education majoring in mathematics. Prerequisite, twenty hours of mathematics and twenty hours in Psychology and Education. Education 687 must be included in the prerequisites or taken concurrently. Mr. Fawcett and mathematics staff of the University School.

Planned to give teachers and prospective teachers of mathematics an enlarged concept of and first-hand experience with important materials and sources useful in providing worthwhile experiences for pupils in secondary schools. Topics include the development and use of important

concepts in mathematics, key sources of materials, tests and evaluation instruments. Students will be expected to collect, construct, and organize materials for their own mathematics classes.

Not open to students who have credit for Education 688.

SCHOOL LIBRARY SCIENCE

503. Organization and Administration of the School Library. Three credit hours. Spring Quarter. Miss Heller.

Simple methods of handling essential routines of a school library will be stressed. The course is planned to include processes such as purchase of materials, accessioning, mechanical preparation of books, the establishment of a loan system, and care and repair of books. Adapting the library to fit the needs of the school and community.

521. Children's Literature. Three credit hours. One Quarter. Autumn and Spring. Miss Streitz, Mr. Jacobs.

A study from the literary and educational points of view of the best literature for elementary school children. Folk literature, fiction, poetry, drama, and subject matter books. Emphasis on development of standards for selecting materials with reference to the interests, needs, and abilities of children at different age levels.

***550. Library Materials for the Secondary School.** Three credit hours. Autumn Quarter. Miss Heller.

The object of this course is to develop ability in choice of books for the building of adequate collections for high schools. Includes evaluative criteria for selection; study for book selection aids; printed lists and periodical reviews; comparative study of editions, series, publishers; the reading and reviewing of books in various fields and a comparison of them with other books in the same field. Practice is given in the use of book selection tools and in the preparation of book lists.

†551. Classifying and Cataloging the School Library. Two credit hours. Miss Heller.

An introduction to the principles of the cataloging and classification of the simpler types of books with special emphasis upon their application to the school library.

***552. Practice Library Work.** Four credit hours. Spring Quarter. Prerequisite, Education 503, 551, 550, 646, and 647. Miss Heller.

Designed to bring students into touch with actual library conditions through practice work in approved school libraries. Students will participate in the various library processes and forms of work under supervision and with considerable responsibility. Supplemented by observations in the libraries of the community and by individual and group conferences. A minimum of eight hours of work per week will be required.

645. The Library in the Modern School. Three credit hours. Winter Quarter. Prerequisite, senior standing in Education.

A course designed primarily for teachers, supervisors, and administrators to acquaint them with the place of the school library in modern education. Objectives of school library service, integration of library and instruction, library standards, selection of personnel, housing and equipment of the library, costs of service, and broader concepts of library materials will be investigated.

†646. Enriching Curriculum Units Through Use of Library Materials. Three credit hours. Prerequisite, Education 550 or Education 521. Miss Heller.

This course is designed to acquaint the student with library resources and materials of all kinds which will vitalize and give background to typical units of the school curriculum. Includes selection and study of materials correlating with subjects chosen for study in both elementary and secondary schools. Practice will be given in deciding upon appropriate study materials and in making bibliographies for selected subjects. Attempt will be made to show that the same materials may be used to enrich more than one subject.

†647. Reference Work in the School Library. Three credit hours. Miss Heller.

The course includes study of the various reference books, such as encyclopedias, dictionaries, atlases, handbooks, gazetteers, and pamphlets, bulletins, government publications, pictures, museum objects, and other audio-visual aids. Practice in handling reference questions is provided.

648. Library Guidance for Adolescent Readers. Three credit hours. Spring Quarter. Prerequisite, senior standing in Education. Miss Heller.

A survey of the nature and content of books suitable for use in meeting the recreational

* Not given in 1947-1948.

† Not given during the academic year, 1947-1948.

reading needs of the adolescent group. The recreational reading program is considered as one cutting across the entire book collection and meeting a variety of interests, including those arising in any teaching area. Emphasis will be placed upon recreational reading as a means of furnishing background for the study of a foreign language, enriching interests arising in social studies classes, extending mathematical understandings, strengthening science interests, correlating with English teaching programs, broadening experiences in the arts, or helping in the solution of personal problems.

Demonstration and discussion of methods of stimulating and directing young people's reading will be provided.

INDUSTRIAL ARTS

455. The Laboratory of Industries. Four credit hours. Autumn and Winter. Five two-hour laboratory and lecture periods each week. This course may be repeated until eight hours have been earned. Required in Industrial Arts Education.

Orientation in various industries through visitation, reading, discussion, experimentation and participation in planning and executing problems chiefly characteristic of woodworking, pattern making, molding, forging, metal working, sheet metal, printing, automotives, ceramics, household mechanics, concrete construction, and electricity. Especially significant to teachers of the Laboratory of Industries in high and continuation schools.

458. Wood and Metal Work. Four credit hours each Quarter. This course may be repeated until twenty hours have been earned. Autumn, Winter, and Spring Quarters. Five two-hour laboratory and lecture periods each week for lecture and laboratory. Required in Industrial Arts Education. Mr. Smith and assistants.

Preparation is given in the principles and practice of procedure planning: in knowledge and skills relating to wood and metalworking tools, machines, and materials; conditions in the wood and metalworking industries. Projects increase in difficulty of design and execution in joinery, turning, carving, finishing, upholstering, caning, cabinet and furniture construction; laying out, forming, bending, drilling, riveting, soldering, tempering, and finishing metals.

460. Problem Planning in Industrial Arts. Three credit hours. Spring Quarter. Six one-hour periods each week for lecture and laboratory. Required in Industrial Arts Education. Prerequisite, Engineering Drawing 401. Mr. Haws and assistants.

Planning of problems involving different materials and activities suitable for development in the program of the laboratory of industries in junior high schools or specialized classes in junior-senior high and vocational schools. Special consideration of materials, style, construction, utility, and adaptability as laboratory projects.

581. Work Experience in Industry. Three to seven credit hours. Autumn and Spring Quarters. Mr. Smith.

Ten or more weeks of work in a job in an industry both of which have been previously approved by the student's adviser in industrial arts, to be taken between the third and fourth or sixth and seventh Quarters of work. This course may be repeated until ten hours have been earned. In no case shall accumulation of credit hours in excess of twenty-two under the heads of Education 505, 506, 581 be permitted. Open only to majors in industrial arts and trades and industries.

The purpose of this course is to provide students with a knowledge of working conditions in industry and their implications for the teaching of industrial arts. Each student must keep a notebook in which a daily account of the work done is recorded, the methods employed, difficulties encountered and how these were solved. A weekly report of his progress must be submitted to his adviser, followed by a written examination to be given in the ensuing Quarter. At the same time the notebook must be submitted, and be accompanied by a statement from the employer concerning the quality of the student's work and the attitudes shown.

585. Industrial Arts and Crafts. Four credit hours. Autumn, Winter, and Spring Quarters. Five two-hour periods for lectures and laboratory. This course may be repeated until twelve quarter credits have been earned. Required in occupational therapy and special education; a recommended elective in social administration.

Development of skills, knowledges, and procedures in the use of hand tools and simple machines working with a wide variety of materials. Special attention will be given to development of appropriate teaching procedures and aids, also developments of suitable projects for school and recreational activities.

Not open to students majoring in Industrial Arts Education.

655. Industrial Arts in Elementary Schools. Three credit hours. Winter Quarter. Required of majors in Industrial Arts Education. Prerequisite, Education 522 or equivalent. Mr. Haws.

First-hand study of typical modern industries as one means of developing understanding and insight into social and economic backgrounds and their implications. Criterion characterization of industrial arts in the program of elementary education. Selection, study, and development of many typical problems with reference to the various levels of the elementary school, in addition to planning the physical setting required.

679. The Teaching of Industrial Arts. Five credit hours. One Quarter. Autumn and Spring. Five recitation periods each week; observations. Required in Industrial Arts Education. Prerequisite or concurrent, Education 533. Mr. Smith.

The nature and extent of industrial arts in the total program of education, organization and development of curricular materials, methods of teaching including observations and demonstrations, purposes and techniques of evaluation, the teacher and his profession.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

714. Selection and Organization of Subject Matter in Industrial Education. Three credit hours. Spring Quarter. Three recitation periods each week. Prerequisite, junior standing in the College of Education and twenty Quarter-credit hours in education, or permission of the instructor. Mr. Smith.

Principles and practice in defining specific area and course objectives and their relationship to the objectives of general education. General and specific criteria and controls determining the selection of subject matter and activities. Techniques of analysis applied to various industrial activities for the selection of facts and activities conducive to acquisition of desirable knowledge, skills, and behavior; and the organization of such materials into integrated courses of study and formulation of teaching plans.

715. Laboratory Planning and Equipment Selection in Industrial Arts. Three credit hours. Winter Quarter. Seven periods each week for lecture and laboratory. Required in Industrial Arts Education. Prerequisite, junior standing or permission of the instructor. Mr. Haws.

Analysis of problems and standards involved in planning rooms and practice in the selection, design, location, installation, and care of equipment in various high school industrial arts laboratories or vocational shops.

†716. Administration of Industrial Education in Secondary Schools. Three credit hours. Spring Quarter. Prerequisite, junior standing and twenty Quarter-hours in education and allied subjects, of which ten hours must be in education. Mr. Stone.

Relation of Industrial Arts and Vocational Education to the general curriculum and the administrative responsibilities entailed. Courses of study; relative costs; coordination problems; class and shop organization, and the development of an effective program of supervision. Selection of teachers and their improvement in service. Of interest to school administrators and teachers of industrial arts and vocational-industrial subjects.

Not open to students who have credit for Education 857.

VOCATIONAL TRADES AND INDUSTRIES

***575. Job and Trade Analysis in Trades and Industries.** Three credit hours. One Quarter. Autumn, Winter, Spring. One lecture and two two-hour laboratory periods each week. Required of students applying for certification to teach vocational classes or in vocational schools, or majoring in the vocational curriculum.

Study of procedures in making occupational analyses. Practices in making one or more detailed analyses.

***576. Organization of Instructional Material in Trades and Industries.** Three credit hours. One Quarter. Autumn, Winter, Spring. Three recitations

* Not given in 1947-1948.

† Not given during the academic year, 1947-1948.

and discussion periods each week. Prerequisite, junior standing in the College of Education and twenty Quarter-credit hours in education, or permission of the instructor.

Principles and practice in determining purposes and in selecting and organizing course materials into an integrated program of studies.

***577. Methods of Teaching in Trades and Industries.** Three credit hours. One Quarter. Autumn, Winter, Spring. Three lecture and discussion periods each week. Required of students applying for certification to teach vocational classes or in vocational schools, or majoring in the vocational curriculum.

A study of the purpose, procedures and problems in teaching industrial subjects, including observation, demonstrations and psychological applications.

***578. Vocational Tests and Measurements in Trades and Industries.** Three credit hours. One Quarter. Autumn, Winter, Spring. One lecture and two two-hour laboratory periods each week. Required of students applying for certification to teach vocational classes or in vocational schools; or those majoring in the vocational curriculum.

Standard aptitude tests and their uses; methods of constructing tests for use in shop and related courses.

***579. Shop Management in Trades and Industries.** Three credit hours. One Quarter. Autumn, Winter, Spring. Three lecture and discussion periods each week. Required of students applying for certification to teach vocational classes or in the vocational curriculum.

An intensive study of the problems of shop management, including selection, installment, maintenance and safe operation of shop equipment.

***580. The Conference Method of Teaching in Trades and Industries.** Three credit hours. One Quarter. Autumn, Winter, Spring. Three lecture and discussion periods each week. Required of students applying for certification to teach vocational classes or in vocational schools, or those majoring in the vocational curriculum.

A study of the theory and practices followed in leading a conference with a critical analysis and discussion of the problem involved. Practice in organizing and conducting a conference teaching situation.

BUSINESS EDUCATION

401-402-403. Beginning Typing. No credit. Autumn, Winter, and Spring Quarters. Four one-hour class-laboratory periods each week. Required in the second year of all students majoring in Business Education who lack proficiency required for admission to Education 471. Elective only by other students (a) declaring a minor or teaching field in Business Education, (b) declaring a major in Secretarial Science, or (c) within limits of instructional and equipment facilities, by permission of the Secretary of the College of Education.

Placement tests for students having had previous training in typewriting will be given during the first class meeting of 401.

404-405-406. Beginning Shorthand. Two credit hours each. Autumn, Winter, and Spring Quarters. Four one-hour class periods each week. Required in the second year of all students majoring in Business Education who lack proficiency required for admission to Education 471. Elective only by other students (a) declaring a minor or teaching field in Business Education, (b) declaring a major in Secretarial Science, or (c) within limits of instructional and equipment facilities, by permission of the Secretary of the College of Education.

Placement tests for students having had previous training in shorthand will be given during the first class meeting of 404.

* Not given in 1947-1948.

***469. Laboratory of Business Education.** Five credit hours. Lecture and laboratory. Basic course for all students pursuing a major in Commercial Education. Students are advised to elect concurrently Business Organization 401.

This course provides an orientation to the whole field of business teacher preparation, through readings, visitations, discussions, laboratory participations, and reports pertaining to the various business offerings included in the public secondary school program. Student guidance in professional specialization.

471-472-473. Advanced Shorthand, Typewriting, and Transcription. Four credit hours each Quarter. Autumn, Winter, Spring. Four two-hour periods each week consisting of lectures, demonstration and laboratory. Required of all students majoring in Business Education and elective only by other students (a) declaring a minor or teaching field in Business Education, (b) declaring a major in Secretarial Science, or (c) within limits of instructional and equipment facilities, by permission of the Secretary of the College of Education. Prerequisite, junior standing in the College of Education or sophomore standing in the College of Commerce and Administration. Miss Wells.

This course will integrate technical shorthand and typewriting as instrumental to general secretarial service and business office practice through the use of business reports, forms and communications.

Students desiring to enroll in the course who have not completed Education 401-402-403, 404-405-406 satisfactorily and who lack proficiency in shorthand equal to 80 words per minute and typing equal to 40 words per minute will be required to make up such deficiency before being admitted to Education 471.

The minimum rate presupposes complete mastery of shorthand theory, some experience in transcribing shorthand notes on the typewriter, and some knowledge of and skill in typing business letters, arranging and typing tables, centering headings, etc.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

721. Fundamental Principles of Teaching Business Subjects. Three credit hours. One Quarter. Autumn and Winter. Prerequisite or concurrent, Education 533 and senior standing in the Business Education Curriculum. Miss Wells.

A basic course in fundamental principles of teaching the business subjects. This course will orient the teachers in the entire field of business teaching in secondary schools and provide the background necessary for specialized courses 725 and 726.

722. Principles of Business Education. Three credit hours. Autumn Quarter. Mr. Hanna.

For teachers of business subjects in the junior or senior high schools. Meaning, purpose, and scope of business education in secondary schools. Importance of and procedure in making occupational surveys in the field of business education.

724. Administration and Supervision of Business Education. Three credit hours. Spring Quarter.

A course designed for administrators and supervisors of business education in the junior and senior high school. Courses of study; laboratory facilities, selection and improvement of teachers in service; and other major executive problems.

725. Selecting and Teaching Junior High School Business Subjects. Three credit hours. Spring Quarter. Prerequisite or concurrent, Education 721.

A professional course for teachers of business arts (sometimes designated as general business science or junior business training) in junior high school for major purposes of exploration, guidance, and fundamentals of consumer business education. Teaching plans and observation of classroom procedures.

726. Selecting and Teaching Senior High School Business Subjects. Two to four credit hours. Autumn Quarter. Prerequisite or concurrent, Education 721. Mr. Hanna.

A professional course for teachers of senior, technical or vocational business high school business subjects, including shorthand, typewriting, business English, office practice, bookkeeping, salesmanship, business law, business geography, business arithmetic, etc. Teaching plans and observation of classroom procedures.

* Not given in 1947-1948.

780. Methods of Teaching Distributive Education. Three credit hours. Spring Quarter. This course is open to those who are now engaged in teaching courses under the George-Deen Act and to students going into the work who have had at least twenty hours of Education.

Deals with vital problems in store and school work and with methods to be used in teaching retailing courses in high school and in college and in the training division of department stores.

Not open to students who have credit for Education 573.

Not open for graduate credit.

781. Curriculum Content for Distributive Occupational Subjects. Three credit hours. Winter Quarter. This course is open to those who are now engaged in teaching courses under the George-Deen Act and to students going into the work who have had at least twenty hours of Education.

Securing, evaluating, and organizing instructional material and experiences for high school retail preparatory courses; cooperative classes and adult extension courses. Consideration of the major channels of distribution will be followed by a critical evaluation of present-day distributive outlets, both retail and wholesale as well as service establishments.

Not open to students who have credit for Education 572.

Not open for graduate credit.

782. Organization and Administration of Education for the Distributive Occupations. Three credit hours. Winter Quarter. This course is open to those who are now engaged in teaching courses under the George-Deen Act and to students going into the work who have had at least twenty hours of Education.

This course is designed as a practical study, not only for those who are already engaged in work in the field, but also for those who, by virtue of successful occupational experience and education, want to render themselves capable and more efficient in administering and supervising distributive education programs. Possible programs that need discussion are those involving Federal, State, and local administration and supervision; the nature of reimbursable related, technical, and professional instruction; employment standards; teacher-training programs and kinds of courses and nature of emphasis.

Not open to students who have credit for Education 571.

Not open for graduate credit.

GUIDANCE

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

750. Fundamentals of Guidance. Three credit hours. Autumn Quarter. Prerequisite, junior standing and twenty Quarter-credit hours in education and allied subjects of which ten, approved by the instructor, must be in education.

A basic but advanced course for all students desiring a comprehensive knowledge of the history, theory, and practice of guidance. Especially for graduate students desiring to specialize in this field. The course considers the aims, materials, techniques, and research instruments of all major divisions of guidance service.

751. Supervised Practice in Counseling. Three to five credit hours. Autumn Quarter. May be repeated until ten hours have been earned. One two-hour recitation and discussion period and two to six hours laboratory each week. Lectures, reports, demonstrations, and laboratory practice. Prerequisite, junior standing and twenty hours in related courses in Education and Psychology which must include Education 750 or Psychology 640, and permission of the instructor. Given in alternate years.

Consideration of counseling problems at different school levels including out-of-school youth. Studies of counseling techniques and aids, counseling practice with pupils, parents, class-room and home-room teachers, visiting teachers, and administrative officers. Experience in using counseling data supplied by school physicians, nurses, psychologists, psychometrists, psychiatrists, employers, and others. Of interest to those preparing to counsel with youth.

752. Guidance Through Social-Economic Studies. Five credit hours. Spring Quarter. Prerequisite, junior standing and twenty Quarter-credit hours

in education and allied subjects of which ten, including Education 750, must be in Education; or permission of instructor.

This course is organized with particular reference to the needs of school advisers and teachers of social-economic (vocational) studies for major purposes of guidance.

755. Survey of Guidance Techniques. Three credit hours. Spring Quarter. Prerequisite, Education 750 or its equivalent.

An overview of the various patterns and techniques of guidance procedure. Of interest not only to prospective specialists in guidance, but designed also for all who want a comprehensive survey of this field. Studies are made of requirements and opportunities for preparation in various lines of guidance specialization.

756. School and Community Resources for Guidance. Four credit hours. Winter Quarter. Prerequisite, Education 750 or its equivalent.

A study of (a) organization and administration of school systems and school communities with particular reference to the needs of guidance workers, and (b) information needed by guidance workers concerning educational opportunities available to high school students and graduates. Emphasis will be placed upon the functional relation of the guidance worker to different types and concepts of school organization, upon information concerning in-school and out-of-school educational opportunities and choices at all levels, and upon teaching pupils how to evaluate for themselves in-school and out-of-school opportunities and choices.

SPECIAL AND ADULT EDUCATION

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

764. Supervised Teaching in Special Classes. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Education 536 or 516-517-518, Psychology 609, or consent of the instructor. Students should consult the instructor before enrolling in this course. This course is given only upon special request. Miss Rosebrook, Miss Sanderson.

Practice teaching for qualified students in classes for the mentally retarded, for behavior problem children, for the defective in speech, or for the deaf and the hard of hearing.

Students will be expected to devote one-third of their time, under the supervision of the University instructor in charge, to this course.

765. Principles and Methods of Teaching the Mentally Retarded. Three credit hours. Spring Quarter. Prerequisite, junior standing and twenty Quarter-credit hours in education and allied subjects of which ten approved by the instructor must be in education. Miss Rosebrook.

A critical study of the various methods which are used in teaching the mentally retarded. In connection with this course, opportunity for practice teaching mentally retarded children will be provided for students desiring it.

766. Principles and Methods of Teaching Behavior Problem Children. Three credit hours. Spring Quarter. Prerequisite, junior standing and twenty Quarter-credit hours in education and allied subjects of which ten approved by the instructor must be in education. Miss Rosebrook.

A critical study of principles and methods used in the adjustment of behavior problem children.

770. Adult Education. Three credit hours. Winter Quarter. Open only to seniors and graduate students. Mr. Nisonger.

A study of the nature, extent, and significance of adult education. Consideration of the psychological characteristics of the adult, influence of social and economic factors on adult needs, history and types of adult education, present trends, future development.

771. Parent Education. Three credit hours. Winter Quarter. Mr. Nisonger.

A study of the nature, extent, and significance of the parent education movement; home and school relationships in the education of children; methods and resources in parent educa-

tion; facilities for training professional and lay leaders; place of school administration and teachers in parent education; state programs of parent education.

Open only to Seniors and graduate students.

NOTE: For additional courses in special and adult education, see Bureau of Special and Adult Education, page 108.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENGINEERING DRAWING

Office, 218 Brown Hall

PROFESSORS PAFFENBARGER, MEIKLEJOHN, WILLIAMS, FIELD, McMANIGAL, JONES, COOPER, AND VIERCK, ASSOCIATE PROFESSOR MACHOVINA, ASSISTANT PROFESSORS PHILBY, SHUPE, HARRIS, WATKINS, AND HAWLEY, MR. McCULLY, MR. REED, MR. RICKLY, MR. KEARNS, MR. STEIGER, MR. BROWN, MR. SODERBERG, MR. YATES, AND ASSISTANTS

400. Elementary Engineering Drawing. Four credit hours. One Quarter. Autumn, Winter, Spring. One lecture and four two-hour laboratory periods each week. Elective in all curricula except engineering. All instructors.

Lettering, use of instruments, applied geometry, projection drawing, size description and pictorial representation.

402. Principles of Engineering Drawing. Four credit hours. One Quarter. Winter and Spring. One lecture and four two-hour laboratory periods each week. Prerequisite, Engineering Drawing 400 or 401. All instructors.

Lettering, auxiliary, development of surfaces, dimensioning, elementary working drawings, charts, and graphs.

403. Descriptive Geometry. Four credit hours. One Quarter. Autumn, Winter, Spring. Four two-hour periods each week for lecture and laboratory. Prerequisite, Engineering Drawing 401. All instructors.

Primary and secondary auxiliary. Problems involving points, lines, and planes, plane curves, intersections.

405. Principles of Engineering Drawing. Four credit hours. One Quarter. Autumn, Winter, Spring. One lecture and four two-hour laboratory periods each week. Required in all curricula in the College of Engineering, first year. Prerequisite, Engineering Drawing 403 or 404. All instructors.

Lettering, slide rule instruction, intersections and development of surfaces, threads, and fastenings, dimensioning, working drawings, charts, and graphs.

Not open to students who have credit for Engineering Drawing 402.

412. Principles of Engineering Drawing. Four credit hours. Spring Quarter. One lecture and four two-hour laboratory periods each week. Prerequisite, Engineering Drawing 401 and 403. Mr. Field.

Development of surfaces, Old Roman Lettering, Threads and fastenings, charts and graphs. Use of slide rule and elementary architectural drawing.

416. Elements of Drawing and Lettering. Two credit hours. One Quarter. Winter and Spring. Six laboratory hours each week. No prerequisites. Elective for students in Engineering, Arts, Education, Pharmacy. Mr. Philby.

Instruction in single stroke commercial gathoc, inclined, display lettering and layout.

421. Engineering Drawing. Three credit hours. One Quarter. Autumn, Winter, Spring. One lecture and three two-hour laboratory periods each week. Prerequisite, Engineering Drawing 405. Mr. Vierck and Mr. Watkins.

Working drawings, technical sketching, dimensioning, limits and tolerances, gears, piping, structural practice, and welding.

422. Machine Drawing. Three credit hours. Spring Quarter. One lecture and three two-hour laboratory periods each week. Prerequisite, Engineering Drawing 421 or 426. Mr. Vierck.

Advanced machine drawing. Drafting room methods and procedure.

538. House Planning. Three credit hours. One Quarter. Autumn, Winter, Spring. Six laboratory and conference hours each week. Mr. Field.

A study of the underlying principles governing the successful planning of houses. Reading architect's plans and specifications, judging completed buildings, designing and sketching plans.

NOTE: TEACHING COURSES. For the Teaching Courses in this department see the Department of Education, Courses 696, 697 and 698.

ENGLISH

Office, 115 Derby Hall

PROFESSORS FULLINGTON, PERCIVAL, HATCHER, WALLEY, WILSON, DERBY, HAROLD, CHARVAT, AND SIMPSON, ASSOCIATE PROFESSORS SNOW, UTLEY, ESTRICH, AND HILDRETH, ASSISTANT PROFESSORS CRAIG, LOGAN, HUGHEY, DUMBLE, SNIFFEN (EMERITUS), WHITMER, HOFFMAN, ALTICK, BLOOMFIELD, LONG, AND STEIN, MR. HABER, MR. KANE, MR. ALBAUGH, MR. CONLEY, MR. TURNER, MRS. TURNER, MR. ADAMS, MRS. ALBAUGH, MR. BIRD, MRS. BLICKLE, MRS. BOWER, MISS CANFIELD, MISS CLIFTON, MR. COFFMAN, MISS COLBY, MR. ELCONIN, MR. ELLIOTT, MRS. HISSONG, MR. LEGGETT, MR. MEAD, MR. ROUSE, MRS. STEIN, MR. STILLWELL, MR. TIDWELL, MR. WOLPERT, ASSISTANT INSTRUCTORS AND ASSISTANTS

NOTE: The minimum requirements and the sequence of courses for students offering English as one of their teaching fields are stated on page 51.

REVIEW COURSE IN ENGLISH COMPOSITION

Preceding the first two class sessions in English 401 and 410, tests will be given to determine the ability of students to use the English language effectively. Students with less than expected ability will be dropped from the regular classes and assigned to English 400, a review course in English fundamentals for one Quarter. A fee of \$5.00 will be charged to cover the cost of instruction.

400. Review of the Elements of Composition. No credit. One Quarter. Autumn, Winter, Spring. Three class periods each week. Director, Mr. Hildreth.
A review of functional grammar and the elementary principles of written composition; practice in writing.

This course is designed for students who are not adequately prepared to undertake the work of English 401 and 410. Students will be assigned to the course on the basis of unsatisfactory performance in the placement test or because of inability to maintain a satisfactory standard in English 401 or 410. This course and English 410 or 401 may not be taken concurrently.

401. Composition and Reading. Five credit hours. One Quarter. Autumn, Winter, Spring. Director, Mr. Hildreth.

A course in the effective reading and writing of the types of expository prose generally required in college courses. Discussion and practice.

Not open to students who have credit for English 410 and 411.

403. Intermediate Composition. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, English 401. Director, Mr. Hildreth.

The course is designed for the student who desires further supervised practice in written composition and drill in the elements of written English.

Not open to students who have credit for English 405, 407, or 507.

410. English Composition. Three credit hours. One Quarter. Autumn, Winter, Spring. Director, Mr. Hildreth.

Stress is laid upon organization, informal exposition, and craftsmanship of writing. Frequent short papers. Outside reading—selected short stories.

Not open to students who have credit for English 401.

411. English Composition. Three credit hours. One Quarter. Autumn, Winter, Spring. Superior students will be placed in English 413. Prerequisite, English 410. Director, Mr. Hildreth.

A continuation of English 410. Emphasis is placed upon the forms of technical writing. One long technical paper during the Quarter. Frequent short papers. Outside reading—selected essays. Extensive practice in careful, judicious reading.

Not open to students who have credit for English 401.

412. English Composition. Three credit hours. One Quarter. Autumn, Winter, Spring. Superior students will be placed in English 414. Prerequisite, English 410 and 411. Director, Mr. Hildreth.

A continuation of English 411. Emphasis is placed upon the use of the library and research paper. One long paper, frequent short papers. Outside reading—selected plays and long fiction.

Not open to students who have credit for English 507.

413. English Composition. Three credit hours. One Quarter. Autumn and Winter. Director, Mr. Hildreth.

This course is the general equivalent of English 411, but the materials and approach are adapted to the superior student. Students who rank high in the placement test may be assigned to English 413 instead of English 411, but only upon the authorization of the Director.

Not open to students who have credit for English 411 or 401.

Open only to students who have received "Em" credit for English 410.

414. English Composition. Three credit hours. One Quarter. Winter and Spring. Prerequisite, English 413. Director, Mr. Hildreth.

This course is the general equivalent of English 412, but the materials and approach are adapted to the superior student. Students who have received credit for English 413 may be assigned to English 414 instead of English 412. All such assignments must be authorized by the Director.

Not open to students who have credit for English 411 or 412.

430. Introduction to Literature. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, English 401. Not open to Juniors or Seniors. Director, Mr. Estrich.

A course primarily for first-year students, designed to develop intelligent appreciation and enjoyment of literature and to encourage the growth of good taste and judgment through intimate contact with the best contemporary verse and prose. Special attention will be given to developing a basic knowledge of literary technique, as displayed in prose fiction, drama, and poetry.

Not open to students who have credit for English 431.

PREREQUISITE FOR 500 COURSES

Unless otherwise indicated, the prerequisites for 500 courses are English 401 and 430, or 410-411-412.

505. Informative Writing. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Elective. Mr. Conley, Mr. Stein, Miss Whitmer.

Guided practice in the writing of the various forms of the essay.

506. Literary Interpretation. Five credit hours. Autumn Quarter. Five class meetings each week. Elective. Prerequisite, English 430 and English 401 or 403 with a grade, "B." Miss Whitmer.

A consideration of the elements, techniques, and forms of literature. Analysis; theory; and extensive practice in the writing of critical interpretation.

507. Narrative Writing. Five credit hours. One Quarter. Winter and Spring. Prerequisite, English 401 or 403 with a final grade of "B," and English 430. Staff.

Guided practice in the writing of short fiction.

508. Verse Writing. Five credit hours. Spring Quarter. Five class meetings each week. Elective. Prerequisite, permission of the instructor. Mr. Stein. The theory of verse structure and practice in writing verse.

Not open to students who have credit for English 658.

510. Masters of American Literature. Five credit hours. One Quarter. Autumn, Winter, Spring. Staff.

Intensive reading and discussion of a number of the major works of American literature chosen from the writings of such authors as Poe, Hawthorne, Melville, Emerson, Thoreau, Whitman, Emily Dickinson, Henry James, Stephen Crane, Frank Norris, and Theodore Dreiser.

Not open to students who have credit for English 608, 609, 610.

529. The English Bible. Five credit hours. Winter Quarter. Mr. Fullington.

A study of the King James version of the Bible as a masterpiece of world literature and an English classic. A brief survey of the English translations, and their place and influence in English literature; a careful consideration of the narrative, prophetic, and poetic books of the Old Testament and of the Gospels viewed from the point of view of literature.

540. Masters of Modern Literature. Five credit hours. One Quarter. Autumn, Winter, Spring. Staff.

Intensive reading and discussion of a small group of recent and contemporary authors, chosen for their importance as artists and as interpreters of the significant problems of modern man in a turbulent world. Six authors will be chosen from the following: Anderson, Shaw, O'Neill, MacLeish, Frost, Galworthy, Conrad, Mann, Pirandello, T. S. Elliott.

Not open to students who have credit for English 440 or 541.

550. Introduction to Shakespeare. Five credit hours. One Quarter. Autumn, Winter, Spring. Staff.

An intensive study of selected plays of Shakespeare. The purpose of the course, however, is not primarily the study of Shakespeare as an individual dramatist, but an understanding and appreciation of dramatic literature as theatrical art and an interpretation of fundamental human experience.

Not open to students who have credit for English 450 or 551.

560. Masters of English Literature. Five credit hours. One Quarter. Autumn, Winter, Spring. Staff.

Intensive reading and discussion of a number of the major works of English literature chosen from the writings of such authors as Chaucer, Shakespeare, Spenser, Milton, Swift, Pope, Johnson, Wordsworth, Carlyle, Browning, Arnold.

570. Designs for Living. Five credit hours. Winter and Spring. Mr. Percival.

This course is designed to present to students who may be at a loss for a pattern of living some of the patterns which man has devised for himself in his long effort to find a satisfying way of life. The approach will be through literature, mainly imaginative literature.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

***601. American Literature During the Colonial and Early American Period.** Five credit hours. Winter Quarter. Given in alternate years. Prerequisite, ten hours of "500" courses in literature.

The evolution of American literary culture, from its British and French origins to the native romanticism of Irving, Cooper, and Bryant.

609. The American Renaissance in Literature. Five credit hours. One Quarter. Autumn and Spring. Prerequisite, ten hours of "500" courses in literature. Mr. Charvat, Mr. Simpson.

An introduction to the major writers of the Romantic movement in America: Poe, Hawthorne, Melville, Emerson, Thoreau, Whitman.

Not open to students who have credit for English 608.

610. American Fiction from Twain to Dreiser. Five credit hours. Winter Quarter. Five class meetings each week. Elective. Prerequisite, ten hours of "500" courses in literature. Mr. Simpson.

Studies in fiction from the Civil War to the First World War, with emphasis on Twain, Howells, James, the religionists, the early naturalists, and Dreiser.

* Not given in 1947-1948.

615. Twentieth Century Fiction. Five credit hours. Spring Quarter. Prerequisite, ten hours of "500" courses in literature. Mr. Hoffman.

An examination of the principle novelists of the Twentieth Century, with special attention to the art of fiction. The writings of Joyce, Gide, Mann, Faulkner, Lawrence and others will be considered.

625. Standards of English Usage. Five credit hours. Winter Quarter. Prerequisite, ten hours of "500" courses in literature. Mr. Estrich.

This course provides training in standards of grammar, spelling, pronunciation, and vocabulary for students interested in writing, teaching, the art of expression, or the development of their own culture. The approach is functional throughout, rather than historical or descriptive.

627. The Language We Speak. Five credit hours. Autumn Quarter. Given in alternate years. Prerequisite, ten hours of "500" courses in literature. Mr. Utley.

A study of the history of English, of its words and structure and logic, of its cultural patterns and philosophical significance, of its use as an instrument of communication and human living.

635. The Age of Wit and Satire. Five credit hours. Autumn Quarter. Prerequisite, ten hours of "500" courses in literature. Mr. Wilson.

The sceptical and critical mind of the Early Enlightenment as reflected in lyric and satiric verse from Dryden through Pope; the comic wit of the Restoration, and the bitter wit of Swift.

637. Mr. Pepys and Dr. Johnson. Five credit hours. Winter Quarter. Given in alternate years. Prerequisite, ten hours of "500" courses in literature. Mr. Percival.

Pepys's *Diary* with its revelation of life in London under Charles II, Boswell's *Life of Johnson*, and supplementary accounts of Johnson and his friends as revealed through unique literary materials.

641. The Romantic Temper. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, ten hours of "500" courses in literature. Mr. Derby, Mr. Altick.

The influence of the French Revolution and the preeminence of the Romantic ideal. Wordsworth, Coleridge, Byron, Shelley, Keats, Hazlitt, Lamb, De Quincey, Scott, and Jane Austen.

642. The Victorian Compromise. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, ten hours of "500" courses in literature. Mr. Altick, Mr. Logan, Mr. Snow.

The spirit and temper of the Victorian period as seen in the poetry of Tennyson and Browning, the essays of Carlyle and Ruskin, three representative Victorian novels, the poetry and prose of Arnold, the Pre-Raphaelites, and the later minor Victorians.

643. The Writing Laboratory. Five credit hours. Spring Quarter. Three group meetings and individual conferences each week. Permission of the instructor. Mr. Snow.

This course will require writing of some scope in the shorter forms of fiction, in the essay, or in criticism, depending on the direction of talent of the individual student. Guidance will be given in the problems of writing through conferences and group discussions. Ten modern books will be read and discussed as examples of writing practice.

654. Introduction to Medieval English Literature. Five credit hours. Spring Quarter. Given in alternate years. Prerequisite, ten hours of "500" courses in literature. Mr. Estrich.

Study of significant literary masterpieces from the Twelfth, Thirteenth, and Fourteenth Centuries, concluding with selections from Chaucer. The literature, largely narrative is chosen for its value in interpreting the later Middle Ages as well as for its independent worth.

***655. The Novel.** Five credit hours. Winter Quarter. Given in alternate years. Prerequisite, ten hours of "500" courses in literature. Mr. Hatcher.

A study of the novel, not as an historical survey, but as a preferred international art form from Trollope and Flaubert to the present day. An acquaintance is assumed with the standard authors, such as Fielding, Scott, Austen, Dickens, and Thackeray.

* Not given in 1947-1948.

670. Recent and Contemporary Drama. Five credit hours. Winter Quarter. Prerequisite, ten hours of "500" courses in literature. Mr. Hatcher.

The social, intellectual, and scientific forces characteristic of recent times reflected in the artistic medium of the plays of Ibsen, Strindberg, Hauptmann, Wedekind, Kaiser, Toller, Chekov, Gorky, Andreyev, Brieux, Rostand, Maeterlinck, Vildrac, Capek, Molnar, Schnitzler, Pirandello, Benavente, Wilde, Shaw, Galsworthy, O'Casey, Milne, Howard, Rice, Barry, O'Neill, and others.

671. Seventeenth Century Literature. Five credit hours. Autumn Quarter. Prerequisite, ten hours of "500" courses in literature. Mr. Walley.

Non-dramatic literature of the later Renaissance. Growth of scientific curiosity and skepticism. Ascendancy of classical ideals. Religious reaction and Puritanism. The poetry of Johnson, Donne, Herrick, Milton, and the poets of church and court. The prose of Bacon, Burton, Browne, Walton, Bunyan, the character writers and essayists.

674. The English Renaissance. Five credit hours. Winter Quarter. Prerequisite, ten hours of "500" courses in literature. Miss Hughey.

The quality of the Renaissance spirit as exemplified in English literature from the early humanists to the death of Queen Elizabeth. The growth of lyric poetry, the sonnets, the rise of English prose, the Tudor translations and books of travel, the poetry of Spenser.

676. Shakespeare. Five credit hours. Spring Quarter. Prerequisite, ten hours of "500" courses in literature. Mr. Walley.

A critical consideration of the art, personality, and achievement of Shakespeare in the light of Renaissance culture and modern significance.

677. English Drama: Medieval and Renaissance. Five credit hours. Autumn Quarter. Five class meetings each week. Elective. Prerequisite, English 550 or the equivalent. Mr. Walley.

An historical and critical examination of the English popular drama from its origin to the closing of the theatres in 1642, with special emphasis upon the evolution of dramatic concepts and theatrical art.

Not open to students with credit for English 669 or 777.

701. Minor Problems in English. One to five credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, at least senior standing and the permission of the instructor.

Students may register for individual directed study under this number by arrangement with the appropriate member of the staff.

705-706-707. Honors Courses. Three to ten credit hours. Autumn, Winter, and Spring Quarters. A program of reading arranged for each student, with individual conferences and reports. Prerequisite: (1) full Senior standing; (2) the record of "A" in at least half of his English courses and an average of "B" in the remainder; (3) the special permission of the professor under whose supervision the work is desired. The usual credit in this course is three hours, and more will be allowed only to candidates for distinction in English who in their Junior year have passed with high grades a program approved by the Committee on Honors. Director, Mr. Snow.

708. Studies in Mid-Century American Symbolism and Idealism. Five credit hours. Spring Quarter. Given in alternate years. Prerequisite, senior standing and ten hours of literature on the "600" level. Mr. Charvat.

An intensive study of the major Romantics, Poe, Hawthorne, Melville, Whitman, Emerson, Thoreau, in relation to the American environment and foreign influences. The course assumes that the student has an acquaintance with the basic writings of the period as developed in English 609.

709. Studies in American Realism and Naturalism. Five credit hours. Spring Quarter. Prerequisite, senior standing and ten hours of courses in literature on the "600" level. Mr. Simpson.

An intensive study of important fiction from Twain to Dreiser and the social and literary background. The course assumes that the student has an acquaintance with the basic fiction of the period as developed in English 510.

***716. Studies in Literary Theory.** Five credit hours. Winter Quarter. Given in alternate years. Prerequisite, senior standing and twenty hours of courses in literature, or permission of the instructor. Mr. Percival.

A study of certain critical points of view, past and present, with practice in critical writing.

727. Twentieth Century Poetry. Five credit hours. Winter Quarter. Five class meetings each week. Elective. Prerequisite, senior standing and ten hours of courses in literature on the "600" level. Mr. Hoffman.

A study of the nature of British and American poetry, its principle sources and the critical sponsors.

735. Dryden. Five credit hours. Winter Quarter. Given in alternate years. Prerequisite, senior standing and ten hours of courses in literature on the "600" level. Mr. Wilson.

A detailed study of the poems, plays, and essays of John Dryden, as exemplifying the principles and practices of the early Enlightenment.

736. Pope. Five credit hours. Autumn Quarter. Five class meetings each week. Elective. General prerequisites must include ten hours of courses in literature on the "600" level. Mr. Harrold.

Reading and investigation of Pope's writings with special reference to his place in the literary and social movements of his age.

743. Carlyle. Five credit hours. Autumn Quarter. Given in alternate years. Prerequisite, senior standing and ten hours of courses in literature on the "600" level. Mr. Harrold.

Reading and investigation in Carlyle's writings, his ideas and his methods, with special reference to his place in Victorian intellectual, social, and economic movements.

744. Arnold. Five credit hours. Autumn Quarter. Given in alternate years. Prerequisite, senior standing and ten hours of courses in literature on the "600" level. Mr. Derby.

Wide reading in the poetry and prose of Matthew Arnold, with a study of his background and his relation to both his own time and the Twentieth Century.

745. Wordsworth. Five credit hours. Winter Quarter. Prerequisite, senior standing and ten hours of courses in literature on the "600" level. Mr. Logan.

Wordsworth as the pivotal figure in the Romantic Movement, the social and political thought of his day, the story of his life, his relation to his contemporary writers, his philosophy of Man and Nature, and his place in literature as a poet and thinker.

746. Middle and Modern English. Five credit hours. Winter Quarter. Prerequisite, English 751. Mr. Utey.

A study of Middle English through close analysis of texts, and of some of the techniques of linguistic research through a Middle English dialect report; the history of Modern English will then be studied from the basis provided by this analysis of the transitional period.

751. Language and Literature of the Anglo-Saxons. Five credit hours. Autumn Quarter. Prerequisite, senior standing or permission of the instructor. Mr. Estrich.

This course aims by a study of Old English literature to reveal the language patterns, social culture, and literary accomplishment of the earliest speakers of English.

753. Chaucer. Five credit hours. Autumn Quarter. Prerequisite, senior standing and ten hours of courses in literature on the "600" level. Mr. Bloomfield.

A close study of Chaucer's principal works and of the poet's development as artist in relation to his social and literary background.

Not open to students who have credit for English 653.

771. Donne and Other Metaphysical Poets. Five credit hours. Spring Quarter. Given in alternate years. Prerequisite, senior standing and ten hours of courses in literature on the "600" level. Mr. Stein.

A close study of significant verse of the early seventeenth century, designed for graduate students and for undergraduates with a special interest in poetry.

* Not given in 1947-1948.

†772. Studies in Seventeenth Century Prose. Five credit hours. Autumn Quarter. Five class meetings each week. Elective. Given in alternate years. Prerequisite, senior standing and ten hours of courses in literature on the "600" level. Mr. Stein.

A close study of the major prose writers of the early Seventeenth Century, concerned chiefly with the development of English prose forms and styles. Designed for graduates and especially interested undergraduates.

NOTE: TEACHING COURSES. For the Teaching Courses in this department see the Department of Education, Courses 670 and 671.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PUBLIC SPEAKING (See Speech)

ENTOMOLOGY (See Zoology and Entomology)

EUROPEAN HISTORY (See History)

FINE AND APPLIED ARTS Office, 104 Hayes Hall

PROFESSORS *HOPKINS, †SEIBERLING, FANNING, A. ROBINSON, FREY, SHERMAN, GRIMES, AND LITTLEFIELD, ASSOCIATE PROFESSORS BRADLEY, ATHERTON, RANNELLS, BATCHELDER, BOGATAY, R. GATRELL, AND CHADEAYNE, ASSISTANT PROFESSORS FETZER, LANDACRE, H. ROBINSON, BLAKESLEY, CAMPBELL, AND KUEHN, MRS. GATRELL, MR. KING, MISS KRUMM, MISS AMOS, MRS. CAMERON, MRS. CHAMBERLIN, MR. LICHTENSTEIN, MISS SEIBERT, MR. SUNDERMAN, MR. O'SICKEY, MR. TARDOWICZ, MR. WINDSOR, AND ASSISTANTS

AREAS

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Courses in the "500" and "600" groups are open to advanced undergraduates. For courses in the "600" group that are open for graduate credit see the Bulletin of the Graduate School.

FREEHAND DRAWING

401-402-403. Freehand Drawing. Two credit hours. Autumn, Winter, and Spring Quarters. Three two-hour laboratory periods each week. Not open to majors in Fine Arts. Miss Landacre.

An elementary course in the principles and practice of expression by freehand drawing. Emphasis upon proportion, perspective, and values in monochrome.

Not open to students who have credit for Fine Arts 421 or 423.

404-405. Advanced Freehand Drawing. Two credit hours. Autumn and Winter Quarters. Three two-hour laboratory periods each week, with weekly problems. Not open to majors in Fine Arts. Prerequisite, Fine Arts 401-402-403 or 421. Mr. Grimes.

Not open to students who have credit for Fine Arts 423.

* Retirement effective September 30, 1947.

† Professor and Director, October 1, 1947.

411-412. Drawing from Life. Three credit hours. Both 411 and 412 are given Autumn, Winter, and Spring Quarters. Two three-hour periods each week, with outside problems. Not open to majors in Fine Arts. Prerequisite, Fine Arts 404-405 or 423. Mr. Sherman, Mr. Chadeayne.

Drawing from the living model with lectures and problems in surface anatomy.

421. Basic Art. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour laboratory periods each week. Miss Landacre, Mrs. Gatrell.

Studio problems requiring correlation of form, drawing, design, and color, to acquaint the student with the principles underlying all visual and tactile art forms. These experiences establish a basic attitude for the professional artist and develop the critical capacity useful in other fields of specialization.

Not open to students who have credit for Fine Arts 401-402-403.

423. Freehand Drawing. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour laboratory periods each week, with weekly problems. Prerequisite, Fine Arts 421 or 401-402-403. Mr. Grimes, Mrs. Gatrell.

Drawing as a means of expression, emphasizing the various possibilities and limitations of the black and white mediums, with problems in composition.

Not open to students who have credit for Fine Arts 404-405.

504. Drawing from the Head. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour periods each week, with weekly problems. Prerequisite, Fine Arts 423 and 431. Mr. Chadeayne, Mr. Sherman.

Drawing from the living model with lectures and problems in the structure of the head.

Not open to students who have credit for Fine Arts 424.

505. Drawing from Life. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour periods each week, with weekly problems. Prerequisite, Fine Arts 424 or 504. Mr. Sherman, Mr. Gatrell.

Drawing from the living model with lectures and problems in surface anatomy and figure composition.

625. Advanced Life Drawing. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Fine Arts 505. Mr. Sherman, Mr. Chadeayne.

Advanced problems in drawing from life and figure composition.

DESIGN

430. Fundamentals of Art. Five credit hours. One Quarter. Autumn, Winter, Spring. Two lectures and three two-hour laboratory periods each week. Not open to majors in Fine Arts. Miss Batchelder.

A general course in the creative use of art materials, with lectures on fundamental art principles in relation to the home, advertising, commercial products and other phases of contemporary life.

431. Elementary Design. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour laboratory periods each week.

The principles of pure design, with practice in the presentation of organic design problems. Lectures, conferences, and technical work.

432. Intermediate Design. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour periods each week, with outside requirements. Prerequisite, Fine Arts 421 and 431. Mr. Bogatay.

Special problems in design, theory, and presentation. Ceramic, textile, metallic, stone, wood, and combined materials are considered for decorative and structural elements.

437. Costume Design. Three credit hours. One Quarter. Autumn, Winter, Spring. Three two-hour laboratory periods each week. Prerequisite, Fine Arts 430 or 431. Miss Bradley.

Special problems utilizing the principles of art in the designing of costumes. The use of textile materials as elements in creative design.

507. Product Design. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour laboratory periods each week. Prerequisite, Fine Arts 432 and 534. Mr. Bogatay.

Application of art principles to products made in industry. Research design problems in various categories, i.e., household appliances, lighting fixtures, furniture, machinery, etc., will be assigned. Experiments on the industrial use of color will be made. Models will be constructed in the laboratory. Written reports and readings will supplement visits to manufacturing concerns.

534. Design Materials. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour periods each week. Prerequisite, Fine Arts 431. Miss Amos.

Individual attention to the solution of problems in creative use of design materials, i.e., woods, base and precious metals, plastics, paper, fabrics, glass, etc.

539. Stage Design. Five credit hours. Autumn Quarter. Five two-hour laboratory periods each week. Miss Batchelder.

The basic principles of stage design: a study of line, form, mass, and color with relation to plastic forms in space. The construction of models. Source material for period plays. This is an elementary course, requiring no drawing ability, offered to meet the needs of stage designers and teachers of dramatic and fine arts.

557. Puppetry. Five credit hours. Winter Quarter. Five two-hour laboratory periods each week. Miss Batchelder.

The making of marionettes, a survey of the history of puppetry and its educational function at the present time. The presentation of marionette plays, their direction and lighting.

572. Elements of Weaving. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Fine Arts 431.

An introductory course in the creative processes of weaving with research, and practical design experience. The making and using of small hand looms, working with numerous materials, weaves and simple patterns, with a study of the construction, warping, threading and manipulation of table and foot power looms.

573. Creative Weaving. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour periods each week. Prerequisite, Fine Arts 431 and 572.

Lectures and research will supplement the use of weaving materials, patterns and pattern drafting, warping, threading, treadling, and the weaving of standard and special weaves on multiple harness looms.

601. Introduction to Interior Decoration. Five credit hours. Autumn Quarter. Lectures and laboratory. Five three-hour periods each week. Prerequisite, Fine Arts 432 and 503 or the equivalent.

General survey of period and contemporary styles of significance in Interior Decoration. Laboratory practice in the use of styles in relation to architectural setting.

Individual and group problems which require a thorough knowledge of particular styles. Emphasis is placed on design and organization. Presentations are made with models, elevation and perspective drawings. Museum and commercial research is included.

631. Advanced Costume Design. Five credit hours. One Quarter. Autumn, Winter, Spring. Five two-hour laboratory periods each week, with outside problems. Prerequisite, Fine Arts 437 and 505. Miss Bradley.

Advanced problems in designing costumes.

Not open to students who have credit for Fine Arts 531.

Not open for graduate credit.

COMMERCIAL ART

558. Commercial Lettering. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour periods each week, with weekly problems. Prerequisite, Fine Arts 421. Mr. Rannells.

The principles of lettering and its application to commercial design.

635-636-637. Illustrative Drawing. Five credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, Fine Arts 505 and 411 or 442 or 527 or 528. Mr. Rannells.

Practice in illustrative drawing with study of technique of pen and ink, pencil, wash, and other mediums. Problems in pictorial composition.

Not open to students who have credit for Fine Arts 535-536-537.

Not open for graduate credit.

651-652-653. Commercial Design. Five credit hours. Autumn, Winter, Spring Quarters. Five three-hour periods each week. Prerequisite, Fine Arts 505. Mr. Rannells.

A general course serving as an introduction to the various phases of commercial art: engraving processes and drawing for reproduction in various mediums.

Not open to students who have credit for Fine Arts 554-555-556.

Not open for graduate credit.

PAINTING

407. Water Color Painting. Two credit hours. Spring Quarter. Two three-hour periods each week. Not open to majors in Fine Arts. Prerequisite, Fine Arts 404-405 or 423. Miss Bradley.

Painting from still life, models, and landscape. Lectures, laboratory work, and criticisms.

408. Water Color Painting. Three credit hours. Autumn Quarter. Two three-hour periods each week, with weekly problems. Not open to majors in Fine Arts. Prerequisite, Fine Arts 407. Miss Bradley.

Painting from still life, models, and landscape. Lectures, laboratory work, and criticisms.

527. Water Color Painting. Five credit hours. One Quarter. Autumn and Spring. Five three-hour periods each week. Prerequisite, Fine Arts 424 or 504 and 431. Miss Bradley.

Painting from still life, models, and landscape. The purpose of this course is to develop the color sense and ability in the technique of water color painting. Lectures, laboratory work, and criticism.

Not open to students who have credit for Fine Arts 441.

528. Oil Painting. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour periods each week. Prerequisite, Fine Arts 424 or 504 and 431. Mr. Hopkins.

Painting from still life with the object of developing the color sense and acquiring directness of presentation. Problems in the organization and execution of pictures.

Not open to students who have credit for Fine Arts 442.

†630. Advanced Water Color Painting. Five credit hours. Prerequisite, Fine Arts 544 or 664 and 505. Mr. Grimes.

Painting from still life, models, and landscapes. Special problems in organization and development of pictures. This course is particularly suited to graduate students who plan to present a thesis in water color painting.

Not open to students who have credit for Fine Arts 380.

644. Advanced Water Color Painting. Five credit hours. One Quarter. Autumn and Spring. Five three hour periods each week. Prerequisite, Fine Arts 441 or 527. Miss Bradley.

A continuation of Fine Arts 527, with advanced problems in picture making.

Not open to students who have credit for Fine Arts 544. Not open for Graduate credit.

645-646-647. Portrait Painting. Five credit hours. Autumn, Winter, and Spring Quarters. Five three-hour periods each week. Prerequisite, Fine Arts 505 and 560 or 660. Mr. Hopkins.

Painting from life. The organization and development of pictures with special reference to the delineation of character.

† Not given during the academic year, 1947-1948.

650. Methods and Materials of the Painter. Three credit hours. Autumn Quarter. Prerequisite, Fine Arts 645-646-647. Mr. Grimes.

A study of painting materials, the composition of pigments, binders, and varnishes. A review of ancient methods of painting with a consideration of their possibilities for contemporary use. Egg tempera, varnish tempera, under-painting, and oil glazes. Laboratory practice and lectures.

660. Advanced Oil Painting. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour periods each week with weekly problems. Prerequisite, Fine Arts 442 or 528. Mr. Hopkins.

Painting in oil from still life and the costume model. Advanced problems in picture making.

Not open to students who have credit for Fine Arts 560. Not open for graduate credit.

SCULPTURE

461. Sculpture. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour laboratory periods each week, with weekly problems. Prerequisite, Fine Arts 421. Mr. Frey.

Lectures and laboratory including the principles of cast making with practice.

562. Advanced Sculpture. Five credit hours. One Quarter. Autumn, Winter, Spring. Five three-hour laboratory periods each week, with weekly problems. Prerequisite, Fine Arts 461. Mr. Frey.

TECHNICAL PROBLEMS

NOTE: For further specialization in any technical field students may enroll in the following courses:

661-662-663. Technical Problems. Three to five credit hours. Enrollment in these numbers may be continued up to a total of fifteen hours each. Autumn, Winter, and Spring Quarters. Open by permission of the department to students in technical fields who have completed the other laboratory courses in their areas and who wish an opportunity for further research in specialized problems.

- (a) Water color painting. Miss Bradley, Mr. Fanning, Mr. Grimes.
- (b) Oil painting. Mr. Grimes, Mr. Hopkins.
- (c) Life drawing. Mr. Sherman, Mr. Chadeayne.
- (d) Sculpture. Mr. Frey.
- (e) Ceramics. Mr. Baggs, Mr. Atherton, Mrs. Fetzer.
- (f) Design. Mr. Rannells, Miss Bradley, Mr. Bogatay, Miss Batchelder.
- (g) Art Education. Miss A. Robinson.
- (h) History. Mr. Fanning.

701-702-703. Minor Problems. Three to five credit hours. Autumn, Winter, and Spring Quarters. Mr. Hopkins, Miss Bradley, Mr. Grimes, Mr. Sherman, Mr. Baggs, Mr. Frey, Mr. Fanning, Mr. Roos, Mr. Bogatay, Mr. Atherton.

This course is open, by permission of the department, to graduate students who are qualified to do original work in painting, sculpture, ceramics, history, or design.

TEACHING METHODS

568. Art History for Elementary and Secondary Teachers. Three credit hours. All Quarters. Lectures and research problems in the collection, organization and presentation to children of the historical epochs of the world's great art. Not open to majors in Fine Arts.

A condensed survey of the material of art history for teachers without art training. The techniques of integrating art with other studies through the use of historical materials.

569. Art for Elementary Teachers. Five credit hours. May be repeated to a total of ten hours. Autumn, Winter, Spring. Five two-hour laboratory periods each week.

This course is a workshop with visual materials and situations for creative thinking desirable for children in the pre-school and elementary grades. It involves projects which are developed through personal interest groups. Students who take this course for the second Quarter will have problems of leadership with a more extensive study of materials, methods, and cultural background.

600. The Theory and Practice of Teaching Art. Five credit hours. Winter Quarter. Five periods each week with outside laboratory assignments, observations and required readings. Prerequisite, Fine Arts 503, 560 or 660 or 544 or 664, and Psychology 407.

A course dealing with the teaching and supervision of art in the elementary, middle, and high schools.

685. Museum Problems. Three credit hours. Autumn Quarter. Lectures, discussion and practice in problems of the Art Museum, for graduates and advanced undergraduates. Prerequisite, Fine Arts 503 or equivalent. Mr. Seiberling.

A course in the functions of a museum, educational and technical; the selection and preservation of art works, their display, and the organization of exhibits; and the museum's relationship to its community and schools.

APPRECIATION

479. An Introduction to Art Appreciation. Three credit hours. One Quarter. Autumn, Winter, Spring.

A course of study planned to give the layman an intelligent appreciation of the visual arts by designating ways of approach, the basis of analysis, and criticism of the plastic, pictorial and related arts. Illustrated lectures, technical demonstrations, quizzes, and reports.

Not open to students who have credit for Fine Arts 508.

529. Art and Civilization. Three credit hours. Spring Quarter. Lectures and discussions. Prerequisite, Fine Arts 479 or 508. Mr. Seiberling.

A course in the problems of understanding art, not only as they concern the artist and observer, but as they relate to political, social and intellectual roots. Art will be studied as both cause and effect of culture, related to experience.

HISTORY

501-502-503. History of the Fine Arts Through the Ages. Five credit hours. Autumn, Winter, and Spring Quarters. Not open to Freshmen. Mr. Fanning.

The history of architecture, sculpture, painting, and the minor arts which best reflect civilization from the time of the earliest artistic expression in Egypt and Mesopotamia to the present-day developments in Europe and America. A survey with consideration of physical and spiritual factors determining the trend of art. Illustrated lectures, quizzes, and reports.

532. History of Costume Design. Five credit hours. Winter Quarter. Five periods each week with outside problems. Miss Bradley.

A study of the development of costume from the standpoint of design with its social and historical background and its connection with the prevailing interior decoration of each period.

Not open to students who have credit for Fine Arts 456.

654. History of Renaissance Art. Five credit hours. Spring Quarter. Five lectures each week. Prerequisite, Fine Arts 503. Mr. Fanning.

The study of the Renaissance movement in Italy as reflected in architecture, painting, and sculpture; its influence upon other countries and its relationship to the intellectual trend from the Fifteenth to the Nineteenth Century.

656. History of Oriental Art. Five credit hours. Winter Quarter. Five lectures each week. Mr. Fanning.

The study of Asiatic culture expressed by the historical development of architecture, sculpture and painting in Persia, India, China, and Japan. Illustrated lectures, reading, and reports.

670. History of the Art of Ancient Egypt, Mesopotamia and Iran. Two credit hours. Autumn Quarter. Prerequisite, Fine Arts 501-502-503, or equivalent. Mr. Fanning.

The specialized study of the ancient arts of the valleys of Nile and Tigris-Euphrates and their influence upon eastern Mediterranean culture including Ancient Persia. Lectures, discussions, and presentation by each student of some special problem of research.

671. History of Hellenic Art. Three credit hours. Autumn Quarter. Prerequisite, Fine Arts 501-502-503, or the equivalent. Mr. Fanning.

A specialized study of Greek architecture, sculpture, and painting. Lectures, round table discussions, and presentation by each student of some special problem of research.

*672. History of Islamic Art. Two credit hours. Winter Quarter. Prerequisite, Fine Arts 501-502-503, or the equivalent. Alternating with Fine Arts 674. Mr. Fanning.

The study of Moslem architecture and minor arts with special attention to origins and influences. Lectures, reading, and reports.

673. History of Christian Art of the Middle Ages. Three credit hours. Winter Quarter. Prerequisite, Fine Arts 501-502-503, or the equivalent. Mr. Roos.

The specialized study of various phases of Romanesque and Gothic art as an expression of medieval Christianity in Italy, France, Germany, Spain, and England. Lectures, reading, discussions, and reports on research topics.

674. History of Spanish Art. Two credit hours. Winter Quarter. Prerequisite, Fine Arts 501-502-503, or recommendation of the Department of Romance Languages. Alternating with Fine Arts 672. Mr. Fanning.

The study of the architecture, sculpture, painting, and minor arts of Spain and the countries under Spanish influence. Lectures and reports.

†675. History of Latin-American Art. Five credit hours. Spring Quarter. Prerequisite, Fine Arts 501-502-503, or the equivalent in related subjects. Mr. Fanning.

History of the architecture, sculpture, painting and related arts of Mexico, and the Central and South American countries, from Pre-Columbian times to the present. The successive Mayan, Toltec, Incan, Aztec and transported European civilizations will be considered in the relation to the environmental, religious, political and economic factors that influenced them.

†677. History of French Art from the Beginning of the Seventeenth Century to the Present Day. Three credit hours. Spring Quarter. Prerequisite, Fine Arts 501-502-503, or recommendation of the Department of Romance Languages. Reading knowledge of French desirable. Alternating with Fine Arts 680.

A specialized study of the architecture, sculpture, and painting of modern France. Illustrated lectures, readings, and reports.

*680. History of Art in Germany and the Low Countries. Three credit hours. Spring Quarter. Prerequisite, Fine Arts 501-502-503, or recommendation of the Department of German. Reading knowledge of German desirable. Alternating with Fine Arts 677.

A specialized study of the architecture, sculpture, and paintings of the Germanic people and their relationship to social and political development. Lectures, reading, and reports.

681. History of English Art. Three credit hours. Autumn Quarter. Prerequisite, Fine Arts 501-502-503, or recommendation of the Department of English.

A study of the work of outstanding architects, painters and sculptors in England as an index of the artistic trend since the beginning of the Sixteenth Century. Illustrated lectures,

682. History of American Art. Five credit hours. Winter Quarter. Prerequisite, Fine Arts 501-502-503, or recommendation of the Department of English.

A study of architecture, painting and sculpture in America during the Eighteenth, Nineteenth, and Twentieth Centuries. Illustrated lectures, reading and reports.

689. Contemporary Art. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Fine Arts 501-502-503, or the equivalent.

The chronological development of artistic styles in Europe and America since the Industrial Revolution. Effects on present-day art of significant movements.

* Not given in 1947-1948.

† Not given during the academic year, 1947-1948.

CERAMIC ART

484. An Introduction to Ceramic Art. Three credit hours. One Quarter. Winter and Spring. No prerequisites. This course may be repeated to a total of nine hours. Mrs. Fetzner.

An introduction to pottery making. Short lectures on materials, forming and decorative processes, glazing and firing. Laboratory practice in building pottery by hand and in the use of the potter's wheel.

Not open to students who have credit for Fine Arts 489.

485. Ceramic Laboratory. Five credit hours. One Quarter. Winter and Spring. One lecture and four three-hour laboratory periods each week. Prerequisite, permission of the instructor. Mrs. Fetzner.

Laboratory practice in building pottery by hand and in the use of the potter's wheel. Mould making and its relation to design.

Not open to students who have credit for Fine Arts 493.

*487. Ceramic Computations. Three credit hours. Prerequisite, Fine Arts 340 or permission of the department. Mr. Littlefield.

The artist's use of ceramic mixtures and their calculation. The possibilities and limitations of color as a design medium.

Not open to students who have credit for Fine Arts 581.

490-491-492. Elementary Ceramic Art. Five credit hours. Autumn, Winter, and Spring Quarters. Two lectures and six laboratory hours each week. Mrs. Fetzner.

An introduction to the art phases of the ceramic field. The following topics are considered: materials and their functions in relation to art values; processes and their application; mould making in its relation to design; decorative processes in relation to glazing and firing; art qualities in the design of ceramic products; esthetic qualities in their relation to consumer demand; laboratory practice.

587. Advanced Ceramic Laboratory. Five credit hours. One Quarter. Autumn, Winter, Spring. Four three-hour laboratories and one conference to be arranged each week. Prerequisite, Fine Arts 489 or 484, 490, 493 or 485. Mr. Atherton.

590-591-592. Ceramic History and Decorative Processes. Five credit hours. Autumn, Winter, and Spring Quarters. Two lectures and nine laboratory hours each week. Mr. Atherton.

A survey in the historical classification of Ceramic Art, emphasizing impulses and influences with a comparative study of results achieved and means of achievement. Laboratory practice in designing ceramic wares using historical and modern methods of decoration. Special consideration is given to the limitations imposed by the media.

593-594-595. Ceramic Composition. Five credit hours. Autumn, Winter, and Spring Quarters. Two lectures, one recitation, and four laboratory hours each week. Prerequisite, freshman chemistry. Mr. Atherton.

Practical applications in the use of ceramic mixtures. Laboratory practice in realizing designs through ceramic materials. The possibilities and limitations of color.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" or "900" groups except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

FLIGHT TRAINING

Ohio State University Airport

MR. PEIRCE AND ASSOCIATES

400. Primary Flight Training. One credit hour. One Quarter. All Quarters. Total of forty flying hours. Approximately four hours per week. Prerequisite, permission of Director.

This course takes the novice student to the solo stage, then prepares him to apply for a Private Pilot's Certificate. A minimum of thirteen hours solo and seventeen hours dual is given.

* Not given in 1947-1948.

401. General Aircraft Operation and Air Traffic Rules. Two credit hours. One Quarter. All Quarters. Three recitations each week. Prerequisite, permission of Director.

Practical elementary operation and care of small type aircraft, precautions in handling aircraft on the ground and in the air, air traffic rules and general aviation information for the novice pilot.

402. Elementary Aeronautical Navigation. Two credit hours. One Quarter. All Quarters. Three recitations each week. Prerequisite, permission of Director.

This course covers elementary pilotage, dead reckoning, aeronautical chart reading, drift problems, deviation and variation problems and contact orientation.

500. Secondary Flight Training. One credit hour. One Quarter. All Quarters. Total of forty flying hours. Approximately four hours per week. Prerequisite, Flight Training 400, 401, 402, or equivalent, holder of Civil Aeronautics Association Private or Commercial Pilot's Certificate and permission of Director.

This course continues the training of the student who has procured his Private Pilot's Certificate. Its purpose is to develop more rapidly the qualities a good pilot must possess for his own safety and the safety of his passengers. More advanced and acrobatic maneuvers are taught in order to develop better timing, coordination, speed sense, orientation and judgment. Included also is transition training to heavier type aircraft. This is another step for the Pilot in preparation for his Commercial Pilot's Certificate.

501. Aircraft Engines. Two credit hours. One Quarter. All Quarters. Two recitations and one hour of conference each week. Prerequisite, permission of Director.

Operation and construction of aircraft engines, including cooling, lubrication, carburetion and ignition systems. The principles of the operation of aircraft propellers are also treated.

502. Aircraft and Theory of Flight. Two credit hours. One Quarter. All Quarters. Three recitations each week. Prerequisite, permission of Director.

530. Flight Instructor Training. One credit hour. One Quarter. All Quarters. Total of forty flying hours. Approximately four hours per week. Prerequisite, holder of Private Pilot's Certificate and total of at least 200 hours flying time or holder of Commercial Pilot's Certificate, concurrent or previous Flight Training 531, concurrent Flight Training 532, permission of the Director.

This course consists of: the precision flying of all maneuvers involved in aircraft primary pilot instructing; demonstration of the maneuvers in flight; criticism of student errors involved in the flying of each maneuver, and the actual maneuver. A portion of the course will consist of the actual teaching of the maneuvers with the course instructor acting both as student and critic and a portion of time will be devoted to team rides, on which one student designated by the course instructor acts as instructor while the teammate acts as student. This course, together with Psychology 531 and Flight Training 532, is designed to prepare the student to successfully accomplish the C.A.A. Flight Instructor's rating examination.

532. Analysis of Flight Maneuvers. Two credit hours. One Quarter. All Quarters. Two recitations each week. Prerequisite, concurrent Flight Training 530, permission of the Director.

A presentation of flight maneuvers involved in aircraft pilot training with emphasis on: the theory of flight involved in each maneuver; analysis of student errors involved in learning each maneuver, and the actual teaching of each maneuver, which involves both adequate language and clarity of explanation. Included are classroom recitation and criticism of oral explanations and analysis of each maneuver. A portion of the time will be devoted to methods of grading student flights.

540. Instrument Flight Training. One credit hour. One Quarter. All Quarters. Total of 20 flying hours and 20 hours flying Link Trainer. Approximately four hours per week. Prerequisite, holder of Private Pilot's Certificate and total of 200 hours flying time or holder of Commercial Pilot's Certificate, concurrent Flight Training 541 and 542, and permission of the Director.

The instrument flight course teaches pilots to fly solely by reference to instruments, to navigate and orientate by the use of radio and to make precision letdowns. These procedures are first presented in the link (ground trainer) to familiarize the pilot with flight instruments and

their uses and also to familiarize him with instrument radio procedures. The training in the ground trainer is then correlated with similar training in the aircraft, thus enabling the trainee to grasp instrument flying in the airplane more rapidly.

541. Advanced Aeronautical Meteorology. Two credit hours. One Quarter. All Quarters. Three recitations each week. Prerequisite, concurrent Flight Training 540 and 542, permission of the Director.

An advanced presentation of aeronautical meteorology which covers the methods of taking weather observations; coverage by the U. S. Weather Services; preparation, analysis and interpretation of the different types of weather maps pertaining to flight planning; and separate treatment of atmospheric temperature, pressure, moisture, and circulation.

542. Radio Orientation and Procedure. Two credit hours. One Quarter. All Quarters. Three recitations each week. Prerequisite, concurrent Flight Training 540 and 542 and permission of the Director.

This course is designed to familiarize the trainee with the fundamentals of instrument flying and the difficulties likely to be encountered and rectification of same, such as pilot's reaction while flying solely by reference to instruments; the procedures and methods used in navigation; orientation and letdowns by use of radio. The analysis of each maneuver as flown by reference to the primary group of instruments and complete panel instruments. The use of the Dalton Aeronautical Computer is also taught.

NOTE. For courses in Psychological Technique of Flight Instructing, see Psychology 531.

FRENCH

(See Romance Languages and Literature)

GENERAL STUDIES

Office, 107 University Hall

PROFESSORS AVEY, DENUNE, PEATTIE, WHITE, AND PATTON, ASSOCIATE
PROFESSORS GRIMM, AND HESTHAL

431. Nature of the Physical World. Five credit hours. One Quarter. Autumn and Spring. The McMillin Observatory and its refracting telescope will also be used for observation. Mr. Hesthal.

This course ignores distinctions between modern physics and astronomy and discusses phenomena that are commonly encountered or likely to be encountered by the average individual. It selects its subject matter from both sciences in such a way as to give an elementary but comprehensive picture of the physical universe. Phenomena including the latest developments in science are discussed in a descriptive, explanatory manner and no previous scientific or mathematical training is assumed.

432. Nature of the Physical World. Five credit hours. Winter Quarter. Three lecture and recitation periods and two one-hour observation and discussion periods each week. The McMillin Observatory and its refracting telescope will also be used for observation. Mr. Hesthal.

A continuation of General Studies 431. It is not necessary that General Studies 431 precede this course.

451. Nature of the Physical World. Five credit hours. Spring Quarter. Four class meetings and one one-hour laboratory period each week. Two field trips, one full day and one half day are required. Mr. Fuller.

A consideration of the materials of the earth, including the atmosphere; the structure of the earth's crust; the surface features of the earth, including the geologic interpretation of landscape; the origin of the earth and its geologic history.

Not open to students who have credit for Geology 401.

***481-*482-*483. Development of Modern Civilization.** Five credit hours each Quarter. Autumn, Winter, Spring. Five lecture and discussion sessions each week. Mr. Grimm with the collaboration of Mr. Peattie, Mr. Patton.

This course presents an interpretation of the fundamental forces of modern social life as outgrowths of our geographic environment and history. Emphasis will be placed on methods

* Not given in 1947-1948.

of analyzing social situations and on developing an intelligent approach to them in order to arrive at sound conclusions. The geographic, economic, sociological, and political aspects of contemporary social problems will be treated as a unified whole in their historical setting.

515. Contemporary Social and Economic Problems. One credit hour. One Quarter. Autumn and Spring. One one-hour lecture each week. No prerequisite. Lectures will be given by members of the social science departments.

The lectures will describe and analyze some of the principal, contemporary social and economic problems both of the United States and of the world at large.

Not open to students who have credit for National Service Course 450.

520. Factors in Successful Marriage. Three credit hours. One Quarter. Autumn, Winter, Spring. Instruction by members of the committee in charge of the Institute for Social Living. Mr. Denune and others.

The objectives of the course: to create an intelligent understanding of the possibilities of successful married life; to aid the student in the development of emotional maturity stressing such factors as a sensible attitude toward sex, a sense of responsibility, etc.; to acquaint the student with those human characteristics that are most closely correlated with successful marriage; to make the student aware of the types of problems that are most frequently faced by married couples and to point out the methods whereby they may be dealt with successfully.

GENETICS

Instruction in genetics is given by various departments. The basic and theoretical courses, both elementary and advanced, are concentrated in the Department of Zoology and Entomology. Practical courses are given in the specialized departments: applied animal genetics in the Departments of Animal Husbandry and Poultry Husbandry, and applied plant genetics in the Departments of Agronomy, Botany, and Horticulture. Descriptions of courses appear, under the respective departments, in the bulletins of the College of Agriculture and Graduate School.

GEOGRAPHY

Office, 213 Hagerty Hall

PROFESSORS SMITH, VAN CLEEF, PEATTIE, AND CARLSON, ASSOCIATE PROFESSORS WRIGHT, AND RANDALL, MR. HAWKES, MR. BEIMFOHR, MR. KARINEN AND ASSISTANTS

The courses in the field of geography may be grouped as follows:

- I. Physical environment: 401, 505, 615, 621, 624, 625, 626, 799; Geology 420, 601, 610.
- II. Economic and cultural geography: 403, 603, 604, 634, 651, 799.
- III. Regional geography: 505, 605, 621, 625, 626; Geology 610.
- IV. Techniques: 611, 700, 799; Geology 615; Economics 522.
- V. Political and historical geography: 505, 621, 624, 625, 626, 631, 651, 712, 799.
- VI. Commerce: 631, 633, 634; Business Organization 665, 720, 721.

401. Introduction to Geography. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Mr. Carlson, Mr. Wright, Mr. Randall, Mr. Hawkes, Mr. Beimfohr, Mr. Karinen.

The elements of the natural environment, their characteristics, their distribution and their relation to population density and human activities. Geography in relation to the physical and social sciences.

403. Economic Geography. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Prerequisite, Geography 401. Mr. Van Cleef, Mr. Smith, Mr. Peattie.

The geography of the world's commodities and their regional aspects; a survey of the economic activities of the principal political divisions of the world in the light of their geographic conditions. An analysis of economic geographic factors in current international affairs.

505. Geography of the United States and Canada. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Geography 403. Mr. Wright.

A geographic analysis of the United States and Canada; the correlation of their natural resources and other environmental factors with their economic and social structure and development.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

603. The Localization of Manufacturing Industries. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403 or Economics 401 and 402. Mr. Wright.

The geography of manufacturing, particularly American industries. Industrial districts. Special study of representative industries as to: labor supply; sources, quantity, and value of material and power used; transportation facilities available; quantity and value of products; and problems of competition and markets.

604. Conservation of Natural Resources. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403, or fifteen hours of allied subjects. Mr. Wright.

The importance of our natural resources. The need for their conservation. Land as a natural resource and economic factor. Character and location as factors in land utilization and value. Regional and national planning for resource utilization.

605. Geography of Ohio. Two credit hours. Winter Quarter. Two class meetings each week. Prerequisite, Geography 401 and 403, or fifteen hours of allied subjects. Mr. Wright.

Geographic influences in the history of the state. Ohio's agriculture, industries, and social conditions, together with the underlying physical, climatic, and other environmental factors that have contributed to the present development of the region.

611. Cartography and Map Interpretation. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403, or ten hours of allied subjects.

The interpretation and appreciation of maps. A consideration of scales, symbols, and the common map projections. The representation of geographic data by the use of dots, isopleths, cartograms, and other graphic devices. A survey of the various maps published by the United States and other map-issuing institutions.

615. Climatology. Four credit hours. Autumn Quarter. Four class meetings each week. Prerequisite, fifteen hours in natural or social science, including one of the following courses: Geography 401, Geology 420, Botany 402 or Agronomy 501. Mr. Smith.

Elements of climate and their distribution. The controls of climate. Types of climate and their distribution with particular reference to agricultural production, natural vegetation and the major soil groups. Concluded by a consideration of the recent thought on the subject of climatic regions and their boundaries.

621. Geography of Europe. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to Seniors and graduating students majoring in economics, history, political science, or other closely related fields, with permission of the department. Mr. Van Cleef.

The geographic factor in the economic, social, and political progress of the nation. Current major problems of the continent in the light of their geographic background. Consideration given to some geopolitical problems.

624. Geography of Latin America. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to Seniors and graduate students majoring in economics, history, political science, or other closely related fields, with permission of the department. Mr. Carlson.

Geographic regions of Mexico, Central America, the West Indies, and South America. The development of the political divisions in relation to their geographic conditions. Special emphasis is placed on the geographic analysis of inter-American affairs.

625. Geography of the Far East. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to Seniors and graduate students majoring in economics, history, political

science, or other closely related fields, with permission of the department. Mr. Smith.

The geographic character of the continent of Asia. The regional divisions of the monsoon lands of the Far East and India. The major activities of the people in the regions of densest population and greatest economic importance.

626. Geography of the Middle East. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to Seniors and graduate students majoring in economics, history, political science, or other closely related fields with permission of the department. Mr. Randall.

Geographic concept of the Middle East. A consideration of its natural regions in relation to the local and international political problems. The importance of the physical and cultural patterns in relation to the current economics.

631. The Historical Geography of Commerce. Three credit hours. One Quarter. Autumn and Spring. Three class meetings each week. Prerequisite, Geography 401, 403, or History 401 and 402. Mr. Peattie.

Geographic factors in commerce to 1800. Resources and production in the ancient and mediaeval world. Trade routes in relation to exchange of ideas. Geographic elements in the early origin of many present-day commercial practices.

633. The Geography of Modern Commerce. Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, Geography 401 and 403. Also open to senior students majoring in economics or political science. Mr. Carlson.

Unequal distribution of natural resources and differences in industrial and social development as basic factors in interregional trade. A consideration of the major raw materials and other important commodities in international commerce. Geographic factors in the establishment and development of trade routes. Concluded with a discussion of major trade areas.

634. Geography of Cities. Three credit hours. One Quarter. Winter and Spring. Three class meetings each week. Prerequisite, Geography 401 and 403 and senior standing. Mr. Van Cleef.

Geographic factors in the origin and growth of urban centers. Analysis and synthesis of the economic and physical structure and functions of trade centers in the light of their geographic setting; areal expansion; intra- and inter-trade center relations; integration with avenues of communication; city planning.

651. The Geographic Factor in Cultural Evolution. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Geography 401, 403, or History 401 and 402. Mr. Peattie.

An advanced course in cultural geography. A consideration of geographic provincialisms with particular reference to cultural differentiation in North America. Regionalism as expressed in politics, literature, and the arts. A critical examination of the theory of environmentalism.

700. Field Work in Geography. Two credit hours. Spring Quarter. Prerequisite, twelve hours of geography. Given in alternate years. Mr. Smith.

A course in the practice of field observation and geographic mapping.

701. Special Problems in Geography. Two to fifteen credit hours. Autumn, Winter, and Spring Quarters. Assigned readings, conferences and reports. General prerequisites must include eighteen hours of geography and consent of the instructor.

Individual study of a special problem or a particular region.

712. Political Geography. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, fifteen hours of political science including Political Science 613, or thirteen hours of geography. Mr. Smith.

The geographical characteristics of political areas. A consideration of size, shape, frontiers, resources, and technological advancement in relation to economic and political strength. Land power versus sea power. Buffer states. Geographical aspects of colonialism. The geographical factor in geopolitics. Special attention will be given to selected areas and problems of historical and current importance.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GEOLOGY

Office, 103 Orton Hall

PROFESSORS SPIEKER, CARMAN, STEWART, LAMEY, AND WHITE, ASSOCIATE PROFESSORS GOLDTHWAIT, AND FULLER, MR. NARLING, MRS. WELLS, MRS. MARPLE, AND ASSISTANTS

Seniors who desire to elect geology may take Geology 601, 602, and 603 instead of Geology 401 and 402.

401. General Geology. Five credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings and one one-hour laboratory period each week. Two field trips, one full day and one half day are required except in the Winter Quarter. All instructors.

A study of the materials of the earth's crust; of the structural features of the earth's crust and how they were formed; and of the surface features of the earth and their origin. In the laboratory the common minerals and rocks and topographic maps are studied.

402. General Geology. Five credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings and one one-hour laboratory period each week. Two field trips, one full day and one half day are required except in the Winter Quarter unless credit was received in Geology 401 when the field trip was taken. Prerequisite, Geology 401. All instructors.

An elementary study of the geologic history of the earth. In the laboratory, the common types of fossils and geological maps are studied.

411. The Geology of our Mineral Wealth. Five credit hours. One Quarter. Autumn and Winter. Four class meetings and one one-hour laboratory period each week. Prerequisite, Geology 401. Mr. Fuller.

An elementary study of the characteristics, geologic occurrence, world distribution, and uses of important earth materials, with special reference to control of mineral production by countries.

412. Geologic Life Development. Five credit hours. One Quarter. Winter and Spring. Five class meetings each week. Prerequisite, Geology 401-402. Mr. Spieker, Mr. Wells.

The development of life on the earth as demonstrated by the history of selected groups of animals, particularly of the higher vertebrates. Attention is centered on the interpretation of the geologic evidence for the evolution of the groups discussed.

413. Geology of Ohio. Five credit hours. Spring Quarter. Five class meetings each week. Prerequisite, Geology 401-402. Mr. Carman.

An elementary study of the physiography, glaciation, drainage changes, stratigraphy and economic products of Ohio. Designed for the non-professional student who has had the introductory course in geology.

504. Laboratory Study of Topographical Mapping. Three credit hours. Autumn Quarter. One class meeting and two two-hour laboratory periods each week.

Study of the elements of the contour map. The relations between the contour map, the geologic map, and aerial photographs.

505. Laboratory Study of Geologic Maps. Two credit hours. Spring Quarter. Two two-hour laboratory periods each week. Prerequisite, Geology 504.

Study of the elements of geologic maps, including the geologic uses of aerial photographs.

510. Geologic Features of the United States. Five credit hours. Winter Quarter. Prerequisite, Geology 402 or General Studies 451.

A general survey of the geology of the United States with special emphasis on the geology of the National Parks and Mountains.

520. Invertebrate Paleontology. Five credit hours. Spring Quarter. Miss Stewart, Mr. Wells.

A systematic survey of the groups of the invertebrate animals significant in the geologic record. Elements of Paleobiology.

525. The Common Rocks. Three credit hours. Winter Quarter. One class meeting and two two-hour laboratory periods each week. Prerequisite, Geology 401 or 435, Mineralogy 401-402, but Mineralogy 402 may be taken concurrently. Mr. Lamey, Mr. Fuller.

A study of the common rocks, their associations and occurrences, and elementary concepts regarding their origin.

526. The Common Mineral Deposits. Five credit hours. Spring Quarter. One class meeting and two two-hour laboratory periods each week. Prerequisite, Geology 525. Mr. Lamey, Mr. Fuller.

A study of the materials composing the common mineral deposits, their associations and relations; elementary concepts regarding the origin of mineral deposits.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Advanced General Geology: Geomorphology. Five credit hours. Autumn Quarter. Four class meetings and one two-hour laboratory period each week. Saturday must be kept open for field trips. Prerequisite, Geology 505 (may be taken concurrently) or Geography 401-403, or senior rank. Mr. Goldthwait.

A detailed study of the processes which shape the land surface and the forms produced. These are inspected on topographic maps and in the area near Columbus.

602. Advanced General Geology: Structural and Dynamic. Five credit hours. Winter Quarter. Four class meetings and one two-hour laboratory period each week. Prerequisite, Geology 505, or senior rank and Geology 601. Mr. Spieker.

A study of the principal kinds of geologic structure, mainly descriptive and diagnostic but in some part interpretative. Practice in the recognition, analysis, depiction, and measurement of structure on geologic maps and sections, and by various mathematical devices, graphic as well as computational.

608. Stratigraphic Geology of Ohio. Five credit hours. Autumn Quarter. Given in alternate years. Prerequisite, Geology 619 and consent of the instructor. Mr. Carman.

Field trips with reports, lectures, and assigned readings. Field trips on Saturdays (entire day) while the weather permits.

The geological formations of Ohio are studied in the field, by rock specimens, and by assigned readings. This course is intended to acquaint the student with the rock formations of Ohio.

***610. Physiography of the United States.** Five credit hours. Winter Quarter. Five class meetings each week. Given in alternate years. Prerequisite, four Quarters of geology, or of geology and geography, including Geology 601. Mr. Goldthwait.

A study of the physiographic regions of the United States. The topographic form and physiographic history with the geologic history as a background. Designed to give the student of geology or geography a working knowledge of the physiography of the United States.

612. Special Problems. One to five credit hours. Autumn, Winter, and Spring Quarters. Assigned readings, conferences, and reports. Prerequisite, four Quarters in geology and permission of the chairman of the department.

A study of special topics by conferences and reports. Laboratory, library or field work. Properly qualified students may carry on work in stratigraphy, sedimentation, structural geology, economic geology, petrology, opaque ore mineral studies, paleontology and physiography under the direction of the appropriate members of the department.

* Not given in 1947-1948.

***613 Glacial Geology.** Five credit hours. Autumn Quarter. Certain Saturdays must be kept open for field trips. Given in alternate years. Prerequisite, elementary courses in geology and preferably Geology 601. Mr. Goldthwait.

Living glaciers and the features produced by glaciers, present or past, with special reference to the features produced in Ohio.

618. Stratigraphy I. Three credit hours. Winter Quarter. Prerequisite Geology 402 and 520. Mr. Carman, Mr. Wells.

The principles of stratigraphy, developed by study of selected American and European Paleozoic systemic examples.

619. Stratigraphy II. Three credit hours. Spring Quarter. Prerequisite, Geology 618. Mr. Carman, Mr. Wells.

A continuation of Geology 618, based upon the Mesozoic and Cenozoic.

***622. Survey of Vertebrate Paleontology and Paleobotany.** Three credit hours. Spring Quarter. Given in alternate years. Prerequisite, Geology 520. Mr. Wells, Mr. Carman.

A continuation of Geology 621 but deals with the paleontology and paleoecology of fossil plants and vertebrates.

***624. Advanced Invertebrate Paleontology.** Three credit hours. Autumn Quarter. Six hours of laboratory work each week. Given in alternate years. Prerequisite, Geology 619. Miss Stewart, Mr. Wells.

Laboratory study of fossil faunas, including paleontological techniques and procedures.

627. Field Geology. Fifteen credit hours. Summer Quarter. Prerequisite, Geology 602, 619 and consent of the instructor. Mr. Spieker.

Concentrated training in the basic essentials of field observation and mapping. The course occupies the full time of the student through the Quarter. The work is done in central Utah, with headquarters in Ephraim. For further details see the pamphlet on field training issued by the Department.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GERMAN

Office, 213 Derby Hall

PROFESSORS BLUME, MAHR, AND SPERBER, ASSOCIATE PROFESSORS GAUSEWITZ, NORDSIECK, AND KRAMER, ASSISTANT PROFESSORS EPP, FLEISCHHAUER, AND SEIDLIN, MR. ETZLER, MR. SOKEL, MR. STEINIGER, MISS SEIFERT, AND ASSISTANTS

Courses 401-402-403-404, or their equivalent, are prerequisite to all other offerings in the department.

For the courses of the fifth and sixth Quarters students may elect either (a) "Introduction to German Literature" or (b) a combination of "Advanced German" and "Scientific German." Students majoring in the humanities should elect (a); science majors may elect either (a) or (b).

A student majoring in German must elect in his junior and senior years not less than twenty-five hours of advanced work in the department. He may complete his major by electing courses after consultation with his adviser in the following related departments: History, Fine Arts, Philosophy, Romance Languages, English, Classical Languages, Music.

Courses for advanced undergraduates fall into three groups: literary, linguistic, and practice. Majors may emphasize any one group, but should confer with the department before planning their program.

ELEMENTARY GERMAN FOR SELECTED STUDENTS

The department offers a special course in elementary German (416-417-418). Admission is granted only upon the basis of examination. Students completing the course may shorten by one Quarter the time necessary to complete their language requirements.

* Not given in 1947-1948.

PLACEMENT AND PROFICIENCY EXAMINATIONS

Students with two years of high school German register for German 403; however, in order to insure proper registration, placement tests are required of all students who continue their study of German in the department after beginning their language elsewhere. Such tests are held during Freshman Week and at the beginning of each Quarter.

Students who are given advanced standing in the department as a result of the placement examination become eligible for University credit in the work covered by the examination.

Proficiency examinations for all courses of the "400" and "500" groups are available to qualified students.

EXCESS ENTRANCE CREDITS IN GERMAN

Freshmen who have excess credits in foreign language are eligible to examination for advanced standing. This examination is given at the same time as the placement tests mentioned above.

THE GERMAN CLUB

The German Club is an undergraduate organization designed to bring the students and the staff together in informal meetings. Students who wish to participate should consult their instructors.

THE GERMAN TABLE

The German Table, supervised by members of the department, offers additional opportunity to use the language informally. Those interested should consult their instructors.

401. Elementary German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. All instructors.

The elements of German grammar. Reading of easy prose. Oral practice.

402. Elementary German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 401 or equivalent. All instructors.

The elements of German grammar. Reading of easy prose. Oral practice.

403. Intermediate German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 402 or equivalent. All instructors.

Reading of narrative prose. Oral and written practice. Grammar review.

404. Intermediate German. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 403 or equivalent. All instructors.

Reading of narrative prose; oral and written practice.

†412. Elementary and Intermediate German. Fifteen credit hours. Autumn Quarter. Fifteen recitations each week. Mr. Kramer, Mr. Nordsieck.

This is an intensive course in which for one Quarter the student will devote his entire time to the mastery of German. The approach will be from oral practice, but the elements of German grammar will be thoroughly studied with written exercises. Also readings from German literature.

The course is especially planned for students who desire to gain a comprehensive knowledge of German in the shortest space of time, whether for governmental or commercial service. The number of students will be limited to fifteen.

German 412 will be given only if a minimum of ten students elect the course.

Not open to students who have credit for German 401-402-403.

416-417-418. Elementary German for Selected Students. Five credit hours. Autumn, Winter, and Spring Quarters. Five recitations each week. Mr. Gausewitz.

The special course in German is open only to students who are selected, by examination, from all regular 401 sections at the beginning of the Autumn Quarter. For students who complete the course, German 404 is waived as a prerequisite for the 500-group (fifth and sixth quarters).

500. Kulturkunde. Three credit hours. Spring Quarter. Prerequisite, four Quarters of German or permission of the department. Mr. Fleischhauer.

A study of the cultural development of Germany. Lectures in very simple German, dealing with the people, institutions, intellectual and spiritual phases of German civilization. Outside readings in English and German. Especially recommended for those who intend to major in German.

† Not given during the academic year, 1947-1948.

505. Readings in Biological Science. Two credit hours. One Quarter. Autumn, Winter, Spring. Two recitations each week. Prerequisite, German 404 or equivalent. To meet college requirements for a fifth Quarter, concurrent registration in Advanced German is recommended. Mr. Epp.

The reading of German texts, including the periodicals in the biological field. The course is designed to meet the needs of premedical students. Outside readings and reports.

506. Readings in Physical Science. Two credit hours. One Quarter. Winter and Spring. Two recitations each week. Prerequisite, German 404 or equivalent. To meet college requirements for a fifth Quarter, concurrent registration in Advanced German is recommended. Mr. Epp.

The reading of German texts, including the periodicals in the physical field. The course is designed to meet the needs of students specializing in chemistry, physics, and mathematics.

507. Elementary Conversation and Composition. Five credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 404 with a minimum grade of "C" or equivalent. It is required of students taking German as a major subject.

An introductory course in speaking and writing German accompanied by a systematic review of German grammar.

Introduction to German Literature. Five credit hours each Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, German 404 or 418. Students with special aptitude in German are advised to register also in German 507. All instructors.

575. Autumn Quarter. German Literature of the Classical Period. Selected readings from Lessing, Goethe, and Schiller.

576. Winter Quarter. German Literature of the Nineteenth Century. Selected readings from Heine, Storm, Keller, Hebbel, Meyer.

577. Spring Quarter. Modern German Literature. Readings from representative authors as Fontane, Mann, Hauptmann, Schnitzler.

Advanced German. Three credit hours each Quarter. All Quarters. Three recitations each week. Prerequisite, German 404 or equivalent. To secure five credit hours, students specializing in science should also elect 505 or 506. Students with special aptitude in German are advised to take 507. No student may take more than three courses in this group. All instructors.

Readings from Eighteenth and Nineteenth Century authors.

581. Autumn Quarter. Nineteenth Century Prose: Droste Hülshoff, Die Judenbuche, and selections from Keller and Storm.

582. Winter Quarter. Nineteenth Century Drama: Kleist, Prinz von Homburg, and selections from Freytag and Hauptmann.

583. Spring Quarter. Modern Prose: Mann, Unordnung und frühes Leid and selections from Schnitzler and Ponten.

584. Summer Quarter. Readings in Eighteenth and Nineteenth Century Literature and selections from Keller and Meyer.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Prerequisite for "600" courses: ten hours of "500" courses in the department. Exceptions may be allowed by instructors for students with special qualifications.

LITERATURE

The courses in literature are presented below in a two-year cycle, except for the Survey of German Literature which is given annually.

1947-1948:

614. German Romanticism. Three credit hours. Autumn Quarter. Mr. Gausewitz.

The romantic revolt against the ideals of classical humanism. Novalis, the Schlegels, Tieck, Kleist, Eichendorff, E.T.A. Hoffman.

615. German Literature of the Nineteenth Century. Three credit hours. Winter Quarter. Mr. Mahr.

Social and literary forces in Germany from the death of Goethe to the founding of the German Reich.

616. Contemporary German Literature. Three credit hours. Spring Quarter. Mr. Blume.

The main currents of German thought and literature from Nietzsche to the present. Special emphasis on Hauptmann, Rilke, and Thomas Mann.

1948-1949:

611. German Literature of the Eighteenth Century. Three credit hours. Autumn Quarter. Mr. Gausewitz.

A study of the rise of Enlightenment in Germany, with special emphasis on Lessing and Schiller.

612. Goethe's Faust. Three credit hours. Winter Quarter. Mr. Mahr.

The history of the Faust legend from the Sixteenth Century to Goethe. Reading and discussion of the drama.

613. Goethe's Life and Works. Three credit hours. Spring Quarter. Mr. Blume.

The development of Goethe's art and personality. His significance for modern times.

617. Survey of German Literature. Three credit hours. Spring Quarter. Mr. Kramer.

An historical survey of German literature from Luther to the present, especially for majors in the senior year.

LINGUISTICS

*656. Introduction to the Historical Study of German. Three credit hours. Autumn Quarter. Three hours lecture and drill each week. Given biennially, alternating with 801, 805, 810. Prerequisite, six Quarters of German or equivalent. Mr. Sperber.

Elements of phonetics. Relations between German and English phonology. Survey of the history of the German language.

*673. Elementary Middle High German. Three credit hours. Spring Quarter. Given biennially, alternating with 801, 805, 810. Prerequisite, six Quarters of German or equivalent. Mr. Fleischhauer.

Introduction to the study of Middle High German with the reading of easy texts.

*675. Elements of German Semantics. Three credit hours. Winter Quarter. Three hours lecture and quiz each week. Given biennially alternating with 801, 805, 810. Prerequisite, six Quarters of German or equivalent. Mr. Sperber.

Studies in German words and the development of their meaning.

705. Principles of the Historical Study of Language. Three credit hours. Spring Quarter. Three lectures each week. Mr. Sperber.

The elements of linguistic science, together with an outline of the Indo-European family of languages.

* Not given in 1947-1948.

PRACTICE

685. Advanced Composition. Three credit hours. Spring Quarter. Three hours lecture and quiz each week. Prerequisite, six Quarters of German or equivalent. Mr. Kramer.

An advanced course in speaking and writing German, accompanied by a review of German syntax.

691. Practical German Pronunciation. Two credit hours. Winter Quarter. Two hours lecture and drill each week. Prerequisite, six Quarters of German or equivalent. Mr. Kramer.

The formation of German sounds. A systematic study of the standard of German pronunciation and its chief variations. Oral and written drill. For majors, especially those who expect to teach the language.

INDEPENDENT STUDY

695. Private Reading. Two to five credit hours. Autumn, Winter, and Spring. Open only on permission of the department. Not open to graduate students. This course may be repeated for credit. All instructors.

For advanced undergraduates who desire to explore further various fields of German literature or philology.

701. Minor Problems. Two to ten credit hours. Autumn, Winter, and Spring Quarters. Open only on permission of the department. This course may be repeated for credit. Mr. Blume, Mr. Mahr, Mr. Sperber, Mr. Gausewitz, Mr. Kramer, Mr. Nordsieck, Mr. Fleischhauer, Mr. Seidlin.

Investigation of minor problems in the various fields of German literature and philology.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 690.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GREEK LANGUAGE AND LITERATURE

(See Classical Languages and Literature)

HISTORY

Office, 211 University Hall

PROFESSORS WASHBURN, HILL, DORN, McDONALD, WOODRING, DULLES, ROSEBOOM, WEISENBURGER, AND SIMMS, ASSOCIATE PROFESSOR GRIMM, ASSISTANT PROFESSORS HARE, LANDIN, FISHER, POMEROY, AND MORLEY, MR. SOUTHARD, MR. BECK, MR. BREMNER, MR. VARG, MR. WALTERS, MR. CLAYTON, MR. HOFFMAN, MR. KUHN, AND ASSISTANTS

(For recommended program in history for students in the College of Education specializing in history see page 55.)

401. History of Western Civilization (1500-1815). Five credit hours. One Quarter. Autumn, Winter, Spring. All instructors.

The age of the Renaissance; the Reformation; Spanish culture; Elizabethan England; French classicism, and early modern natural science; national monarchies, absolutism, and mercantilism; the Enlightenment; the French Revolution and Napoleon. Lectures, discussion, and required reading.

402. History of Western Civilization (1815 to the Present). Five credit hours. One Quarter. Autumn, Winter, Spring. All instructors.

Restoration and reaction; democracy and economic and political radicalism; Romanticism; nationalism and imperialism; the World War; the peace settlement; post-war Europe. Lecture, discussion, and required reading.

History 401 and 402 provide a logical sequence, but each may be taken independently as electives.

403. History of the United States (1763-1865). Five credit hours. One Quarter. Autumn, Winter, Spring. This course carries full credit for Seniors. All instructors.

A study of the general political, constitutional and economic development of the United States from the beginning of the Revolutionary era to the end of the Civil War. Textbook, collateral readings, and discussions.

404. History of the United States (1865 to the Present). Five credit hours. One Quarter. Autumn, Winter, Spring. This course carries full credit for Seniors. All instructors.

A continuation of History 403.

411. The Ancient World. Five credit hours. Spring Quarter. Mr. McDonald.

Prehistory, Egypt, Babylon, Assyria, Persia, Greece, and Rome. A general survey of the political and social institutions of antiquity.

417. The Middle Ages. Five credit hours. One Quarter. Autumn, Winter, Spring. All instructors.

Roman civilization and its decline; early Christianity and the Barbarian invasions; Islam and Arabic culture; rise of the Papacy; Charlemagne and the Carolingian Empire; Otto I and the Holy Roman Empire; feudal society; the medieval Church; the Crusades; the rise of towns; the Renaissance; the rise of national states. Textbooks, lectures, discussion, and required reading.

Not open to students who have credit for History 400.

501. Cultural History of Modern and Contemporary Europe. Five credit hours. One Quarter. Autumn, Winter, Spring. Designed primarily for students not majoring in history.

The reaction against the Age of Reason; the influence upon European culture upon nationalism, the industrial revolution, and the scientific advancement of the Nineteenth Century; the impact upon contemporary culture of the technological revolution and the political, economic, and social crises of the Twentieth Century. Textbooks, lectures, collateral readings, and reports.

Not open to students who have credit for History 401 and 402.

505. A Social and Cultural History of the United States. Five credit hours. One Quarter. Autumn, Winter, Spring.

A course stressing non-political aspects of United States history. Designed especially for advanced students in other departments who wish a survey of social trends in the development of the United States. Lectures, readings, and discussion.

Not open to students who have credit for History 403 and 404.

510. Aspects of British History in Biographical Study. Five credit hours. Spring Quarter.

Lectures, textbooks, and required reading of six to ten biographies and relevant selections from prose and poetic literature. Certain salient developments of English history and traits of English life will be studied through the medium of biography, unity being furnished by the use of a basic manual of history.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For all courses in this group, the prerequisite is at least Junior standing and four Quarter courses in the social science field, of which at least two must be in history. Specific prerequisites are indicated in connection with specific courses.

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

607. The Renaissance. Three credit hours. Autumn Quarter. Prerequisite, History 401-402. Advanced students from other departments without this prerequisite must obtain the consent of the instructor. Mr. Grimm.

The Renaissance primarily as an Italian movement. The political evolution of the Italian communes into city republics, with special emphasis on Florence, Milan, Venice, Genoa and Rome; early capitalism and industrial and commercial movements; an analysis of the culture, art, science, and literature of the Renaissance and their influence upon the Church, the Papacy, and modern modes of thought and behavior. Lectures, readings, reports, and discussions.

608. The Reformation. Three credit hours. Spring Quarter. Prerequisite, History 401-402. Advanced students from other departments without this prerequisite must obtain the consent of the instructor. Mr. Grimm.

The church and European society in the later Middle Ages; culture and thought in the age

of the Reformation; the rise of the European state system; Luther and the German national movement; Zwingli and Switzerland; Calvin; the expansion of Protestantism in Europe; and the relation of the Reformation to medieval and modern civilization. Lectures, readings, reports, and discussions.

611. Constitutional History of England (to 1485). Three credit hours. Autumn Quarter. Prerequisite, History 682 or consent of the instructor but open to Juniors and Seniors preparing for law without prerequisite. Mr. Woodring.

The development of an effective royal administration, rise of common law and system of courts, dawn of representative institutions, completion of basic institutions and tradition of constitution by 1485. Lectures, textbook, source problems, collateral readings.

612. Constitutional History of England (since 1485). Three credit hours. Winter Quarter. Prerequisite, History 611 or consent of instructor. For Juniors and Seniors preparing for law as in case of History 611. Mr. Woodring.

The Tudor system, the struggle between king and parliament, cabinet government, electoral reform, and the law of the modern constitution. Lectures, textbook, source problems, collateral readings.

617. The Age of Enlightenment (1650-1789). Three credit hours. Spring Quarter. Mr. Grimm.

This course offers a study of the transformation of feudal society into the modern absolute state in its social, economic and constitutional aspects, as exemplified in France, Spain, Austria, Prussia, and Russia. Special emphasis will be placed on France under Louis XIV, on the evolution of Prussia and Russia, the changing diplomatic alignments of the principal European Powers from 1660 to 1789, on the intellectual enlightenment of the eighteenth century and Enlightened Despotism. Readings, discussions, and reports.

619. Medieval Civilization. Three credit hours. Autumn Quarter. Prerequisite, History 401-402 or a major in history. Advanced students from other departments without this prerequisite admitted with consent of the instructor.

The formation of feudal society; culture of castle and court; the rise of towns and their social and economic life; the evolution of the Medieval Church and its educational and artistic contributions. Lectures, readings, problems, and class discussion.

621. Expansion of Europe (to 1588). Three credit hours. Autumn Quarter. Prerequisite, two Quarters in basic history courses. Advanced students from other departments without this prerequisite must obtain the consent of the instructor. Mr. Washburne.

A study of the early geographical ideas of the Europeans, their first contacts with the outside world, the period of discovery, the creation of the Portuguese empire in the east and the Spanish monopoly in the west, to the collapse of the Iberian control of European expansion by the destruction of the Armada in 1588. Lectures, readings, and discussions.

622. Expansion of Europe (1588-1815). Three credit hours. Winter Quarter. Prerequisite, same as for History 621. Mr. Washburne.

A study of the rise of the chartered trade companies; the ascendancy of the Dutch; the contest between the Dutch and the English for commercial supremacy and the long struggle between the English and the French for maritime supremacy, with its resultant effects upon India and North America through the settlement at the end of the Napoleonic era. Lectures, readings, and discussions.

623. Expansion of Europe (1815 to the Present). Three credit hours. Spring Quarter. Prerequisite, same as for History 621. Mr. Washburne.

A study of the problems of expansion in the Nineteenth and Twentieth Centuries; the development of India, the movement into the southern Pacific, the partition of Africa, and the various phases of modern imperialism after 1876 through the readjustment of territory under the mandate system after the World War. Lectures, readings, and discussions.

624. The French Revolution and Napoleon. Three credit hours. Autumn Quarter. Prerequisite, History 401-402, or a major in history. Advanced students from other departments without this prerequisite must obtain the consent of the instructor. Mr. Morley.

Discussion of ideas and conditions in France preceding the Revolution; course of the Revolution, 1789-1795, with emphasis on the Reign of Terror; results of the Revolution as the basis of modern France; more rapid sketch of events, 1795-1815; the Directory; the Revolutionary wars and rise of Napoleon Bonaparte; the Napoleonic Empire. Textbook, lectures, discussion, readings (including memoirs of the time).

625. Modern France (since 1815). Three credit hours. Winter Quarter. Prerequisite, same as for History 624. Mr. Morley.

Emphasis on internal history of the Third Republic, after introductory sketch of movements from 1815 to 1870. Formulation of republican program in the late Second Empire; founding of the Republic; political developments, 1876-1914; France after the war; the "fall of France." Lectures, discussion, readings.

626. The Near Eastern Question (1815 to the Present). Three credit hours. Spring Quarter. Mr. Fisher.

A study of the conflicting national and international problems which resulted in the disintegration of the Ottoman Empire, the formation of the Balkan States and the development of the present Turkish national government with its role in European affairs. Lectures, readings, and discussion.

629. Modern Germany (1789-1918). Three credit hours. Winter Quarter. Prerequisite, History 401-402. Advanced students from other departments without this prerequisite must obtain the consent of the instructor. Mr. Grimm.

Introductory lectures on the basic problems and tendencies of German history; Germany and the French Revolution; German Enlightenment and Romanticism and their relation to political thought; the Stein-Hardenberg reforms and the war of liberation; Prussia, Austria and the problem of German unity; the nationalist and democratic movements; the Bismarckian Empire; industrial development; William II and the World War; the German Revolution of 1918. Lectures, readings, reports, and discussions.

630. The Diplomacy of Europe (1878-1919). Three credit hours. Autumn Quarter. Prerequisite, History 401-402 or a major in history. Advanced students from other departments without this prerequisite must obtain the consent of the instructor. Mr. Washburne.

A study, with the use of the new material now available, of the diplomatic obligations of the European states from the Congress of Berlin of 1878 to the Paris Conference of 1919; the formation of alliances, the crises which culminated in the war, and the attitude of European leaders. Lectures, readings, and discussions.

631. Constitutional History of the United States (to 1876). Three credit hours. Autumn Quarter. Prerequisite, History 403-404. Mr. Dulles.

Constitutional problems involved in the struggle for independence, establishment of the national government, the growth of democracy, the slavery controversy, and the Civil War. Lectures, readings and discussions.

632. Constitutional History of the United States (since 1876). Three credit hours. Winter Quarter. Prerequisite, History 631 or equivalent. Mr. Dulles.

Constitutional problems arising from the growth of capitalism, the organization of labor, territorial expansion, the first World War and New Deal reforms. Lectures, readings and discussions.

633. The Slavery Controversy in the United States. Three credit hours. Autumn Quarter. Prerequisite, History 403-404. Mr. Simms.

The origins of the institution of slavery; the social system of the old South; the psychological, economic, political and constitutional implications of the controversy; secession, and the appeal to arms and the impact of war upon life north and south. Lectures, readings, and discussions.

634. Reconstruction and the New South (1863 to the Present). Three credit hours. Winter Quarter. Prerequisite, same as for History 633. Mr. Simms.

The controversy over reconstruction plans; the triumph of the industrial order; the social and economic readjustments in the Southern States during and after the period of reconstruction. Lectures, readings, and discussions.

635. American Foreign Policy to the Close of the Civil War. Three credit hours. Autumn Quarter. Prerequisite, History 403-404. Mr. Hill.

The foreign relations of the United States, beginning with the diplomacy which resulted in the establishment of independence and including such subjects as the struggle for neutral rights and commercial recognition, the extension of territory on the continent, the origin of the Monroe Doctrine, and the international controversies of the Civil War. Lectures, discussions, and reports.

636. American Foreign Policy since the Civil War. Three credit hours. Winter Quarter. Prerequisite, same as for History 635. Mr. Hill.

Problems in the diplomacy of the United States resulting from the Civil War, the development of the Monroe Doctrine, the acquisition of dependencies, relations with Latin America and the Orient, arbitration, the Isthmian Canal, and the two World Wars. Lectures, discussions, and reports.

637. Recent History of the United States (1898-1920). Three credit hours. Autumn Quarter. Prerequisite, History 403-404 or its equivalent. Mr. Dulles.

The impact of modern industrialism upon American imperialism, society, government and foreign policy. Laissez-faire and government regulations, the Progressive movement, the first World War.

638. Recent History of the United States (since 1920). Three credit hours. Winter Quarter. Prerequisite, History 403-404 or its equivalent. Mr. Dulles.

A continuation of History 637, but may be taken separately. Prosperity and depression, the New Deal, the United States in international affairs, the second World War.

639. The Influence of Immigrant Groups upon United States History. Five credit hours. Spring Quarter. Prerequisite, History 403-404. Mr. Weisenburger.

The share of different immigrant groups in the building of the nation, from the colonial period to the present, with special emphasis on the influence of immigration upon American political, economic, social, and cultural development. Lectures, reading, and discussions.

641. The Westward Movement since 1783. Five credit hours. Spring Quarter. Prerequisite, History 403-404. Mr. Roseboom.

This course is a continuation of History 644 but may be taken separately. It deals broadly with the westward spread of settlement since 1783, emphasizing such topics as land policies, transportation and trade, Indian relations, sectionalism, frontier social and intellectual life, and the effects of the westward movement on American development.

643. Political Parties in the United States. Five credit hours. Spring Quarter. Prerequisite, History 403-404. Mr. Roseboom.

The radical party of the Revolution; the origin and growth of national parties; the slavery issue in party politics; the effect of the Civil War upon parties; party development in recent American history, special attention being devoted to the influence of the new economic and social conditions in creating new parties and policies. Lectures, readings, discussions, and reports.

644. American Colonization and the Westward Movement to 1783. Five credit hours. Autumn Quarter. Prerequisite, History 403-404. Mr. Roseboom.

This course deals with the transplanting of European culture and institutions to North America, the resultant international rivalries, the westward spread of English settlement, and the course of the American Revolution in its political, social, economic, and military aspects. For a continuation of this course see History 641.

645. Latin America. Three credit hours. Autumn Quarter. Mr. Hill.

The European background; native cultures of the New World; conquest and settlement; political, social, and economic institutions; the wars for independence. This course affords a natural introduction to History 646. Lectures, readings, and discussions.

646. Latin America. Five credit hours. Winter Quarter. Mr. Hill.

The evolution of the A B C powers, with minor consideration of the other republics of South America; major problems of an Inter-American and an international nature. This course is a logical continuation of History 645. Lectures, readings, and discussions. For a continuation of this course see History 679.

647. History of Canada. Five credit hours. Spring Quarter. Mr. Weisenburger.

An intensive study of Canadian history with special emphasis on the relations of Canada with the United States and with the mother country, and the comparison of Canadian institutions and problems with our own. Lectures, textbooks, collateral readings, and discussions.

649. Greek Civilization. Three credit hours. Winter Quarter. Mr. McDonald.

A study of the contributions of Greece to Western Civilization; political institutions, law, religion, drama, literature, science, and philosophy. Lectures, readings, and discussions.

650. Roman Civilization. Three credit hours. Autumn Quarter. Mr. McDonald.

A study of Roman contributions to Western Civilization; political institutions, Roman law, religions in the Roman Empire with special reference to Christianity, slavery, agriculture, economic life, etc. Lectures, readings, and discussions.

655. Greek History. Five credit hours. Autumn Quarter. Mr. McDonald.

An intensive study of Greece, with a brief introductory survey of the ancient civilization of the Near East. Lectures, readings, reports, and discussions.

656. Roman History. Five credit hours. Winter Quarter. Mr. McDonald.

This course is the natural continuation of History 655. Lectures, readings, reports, and discussions.

676. History of Modern Russia. Three credit hours. Winter Quarter.

Prerequisite, History 402 or its equivalent. Mr. Morley.

This course is designed to acquaint the student with the major developments in modern and contemporary Russia. The early period down to the nineteenth century will be treated in broad outline. Emphasis will be given to the changes in Russia during the last century which laid the basis for the revolutions and the rise of Soviet civilization. Lectures, readings, and discussions.

677. Russia since 1917. Three credit hours. Spring Quarter. Follows in sequence History 676. Mr. Morley.

This course continues the history of Russia from the March Revolution to the present time. It attempts the historical analysis of the March and November Revolutions, foreign intervention and civil war, the economic situation, the five year plans, foreign affairs and the present situation after the war. Lectures, readings, and discussions.

679. Latin America. Five credit hours. Spring Quarter. Mr. Hill.

A study of the republics of Middle America, with major emphasis on Mexico. This course is a logical continuation of History 645 and 646. Lectures, readings and discussions.

682. History of England, Medieval Period (to 1485). Three credit hours. Autumn Quarter. Mr. Woodring.

History 682, 683, and 684 constitute an interdependent sequence in which the history of England and Greater Britain, socially considered, is rapidly surveyed from the earliest times to our own day. The aim of the course is to give a connected narrative, in terms of social, economic, and political conditioning, expressed in terms of historic personalities. Particularly, the necessary background for the student of English literature and of law, will be furnished. The student will be introduced to a wide range of books, both historical and literary. Graduate students will be required to synthesize their readings into a written report.

683. History of England, Tudor and Stuart Periods (1485-1714). Three credit hours. Winter Quarter. Prerequisite, History 401 or 682, or by consent of instructor. Mr. Woodring.

***684. History of England, Hanoverian and Modern Period (1714-1900).** Three credit hours. Spring Quarter. Prerequisite, History 401 and 402, or 683, or by consent of instructor. Mr. Woodring.

***685. Cultural and Social Eighteenth Century England.** Three credit hours. Spring Quarter. Given in alternate years. Mr. Woodring.

The society of the Eighteenth Century and the politics of George III, the background of the American Revolution and the struggle with revolutionary France in terms of the Industrial Revolution. Lectures, collateral readings, special investigations, and reports.

†686. Contemporary England. Three credit hours. Spring Quarter. Given in alternate years. Mr. Woodring.

Victorian England in its economic, political, and cultural phases transformed by imperialism, the Great War, and the rise of new class theory and organization. Lectures, readings, reports, informal discussions.

689. The History of Ohio. Three credit hours. Autumn Quarter. Prerequisite, History 403-404 or permission of the instructor. Mr. Weisenburger.

A general survey of the history of Ohio—social, economic, religious, and political—from the Indian period to the present time.

Not open to students who have credit for History 437.

* Not given in 1947-1948.

† Not given during the academic year, 1947-1948.

690. Contemporary Europe (1919-1933). Three credit hours. Winter Quarter. Mr. Washburne.

A study of the present day problems. A consideration of the phases of the attempted reconstruction of Europe following the Paris Peace Conference of 1919. This includes the issues involved in the subjects of post war diplomacy, reparations, disarmament, the new governments of Europe, and the continental development until the establishment of the dictatorship in Germany.

Not open to students who have credit for History 628.

691. Contemporary Europe (since 1933). Three credit hours. Spring Quarter. Mr. Washburne.

A continuation of History 690 but may be taken separately. Consideration will be given to the re-armed Germany and its effect upon the affairs of the world, the failure of collective security in Manchuria, Ethiopia, and Spain, the formation of new alignments with the breakdown of the treaty of Versailles with the settlement at Munich in 1933 and its consequences.

700. Minor Problems in History. One to five credit hours. All Quarters. Open by permission of the instructor.

The course consists of individual study in some field of historical development and is designed to allow the student to work upon a problem in which he is particularly interested. Special permission must be obtained to register for this course.

705-706-707. Honors Courses. Three to five credit hours. Autumn, Winter, and Spring Quarters. Informal conferences, the intent being to allow full scope to the initiative of the student. Prerequisite, senior standing and forty hours of credit in history, with the record of "A" in at least half of the History courses and an average of "B" in the remainder. At least two Quarters required of candidates for the degree of Bachelor of Arts with Distinction in History. All professors.

A special topic is assigned to each student each Quarter, and results are tested by the requirement of theses and a special examination. Inability to attain a grade of "B" in this course will be a disqualification for special honors.

NOTE: For courses in Far Eastern history see Political Science 648 and 649.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 678.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department, and for requirements for advanced degrees, see the Bulletin of the Graduate School.

HISTORY OF EDUCATION

(See Education)

HOME ECONOMICS

Office, 220 Campbell Hall

PROFESSORS BRANEGAN, DONELSON, GORRELL, HEYE, LEHMAN, M. PRICE, AND SCOTT. ASSOCIATE PROFESSORS BANCROFT, DAVIS, HUGHES, KENNEDY, PRESSEY, H. PRICE AND WOOD. ASSISTANT PROFESSORS BEARD, GREEN, HEINER, IRVINE, KYLE, LEWIS, LYLE, MAUCK, MOORE, NEWARK, PATTON, PETZEL, RYAN, TURNBULL, AND URBAN, MISS ALEXANDER, MISS LANE, MRS. LINVILLE, MRS. RICE, MRS. SMITH, MRS. WERTENBERGER, AND ASSISTANTS

(For Curriculum in Home Economics, see page 66.)

405. Introduction to Home Economics. Three credit hours. One Quarter. Autumn and Spring. Three class meetings each week. Required of all students majoring in home economics except those who have transfer credit for twenty or more Quarter-credit hours of home economics. Miss Heye, Mrs. Linville, Mrs. Moore.

This course is designed to challenge the student with the problems inherent in present-day

home life, and to arouse interest in further study and experiences concerned with meeting such problems. Basic needs of the family are introduced. The contribution of home economics to family well-being is emphasized.

430. Introduction to Clothing and Textiles. Five credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour class meetings and two two-hour laboratory periods each week. Home Economics 405 and Fine Arts 430 or 431 are recommended as preceding or concurrent courses. Required of all students majoring in home economics. Mrs. Linville, Miss Turnbull.

This course is planned to assist the student in analyzing personal and family resources and needs in relation to clothing. It aims to develop standards in the selection, purchase, use, and maintenance of the wardrobe.

Not open to students who have credit for Home Economics 401, 402, or 508.

431. Clothing: Principles of Construction. Three credit hours. One Quarter. Autumn, Winter, Spring. Three two-hour periods each week. Prerequisite, Home Economics 430. Mrs. Linville, Miss Mauck, Miss Ryan.

The purpose of this course is to develop some understanding of the principles underlying the use of patterns, and the construction and fitting of garments. Experience in applying these principles is provided.

Not open to students who have credit for Home Economics 402 or 508.

440. Introduction to Nutrition and Foods. Five credit hours. One Quarter. Autumn, Winter, Spring. Five class meetings each week. Home Economics 405 is recommended as a concurrent or preceding course. Required of all students majoring in home economics, Miss Green, Miss Hughes, Mrs. Wertenberger.

This course is designed to assist the student in developing food selection habits which meet nutritional standards. The social significance of food and standards for food selection will be emphasized from the standpoint of meeting needs at various economic levels.

Not open to students who have credit for Home Economics 410, 510, or 611.

441. Foods: Principles of Preparation. Five credit hours. One Quarter. Autumn, Winter, Spring. Two one-hour class meetings and three two-hour laboratory periods each week. Prerequisite, Home Economics 440. Miss Green, Miss Hughes.

The function of this course is to develop some understanding of basic principles of food preparation and preservation and some ability to apply these principles as they relate to commonly used foods in an adequately balanced diet.

Not open to students who have credit for Home Economics 412 or 510 (five credit hours).

450. The House and Its Equipment and Furnishings. Three credit hours. One Quarter. Winter and Spring. Two one-hour class meetings and one two-hour laboratory period each week. Required of all students majoring in home economics. Mrs. Moore.

A study of present-day housing from the standpoint of health, safety, economy, convenience, aesthetic qualities, and other values of concern to the family. Introduction to the problems involved in equipping and furnishing the house.

503. Clothing. Five credit hours. One Quarter. Autumn, Winter, Spring. Two one-hour class meetings and three two-hour laboratory periods each week. Prerequisite, Fine Arts 437 and Home Economics 402 or 431, or 508. Miss Ryan.

A study of the principles of clothing selection and of flat pattern designing. Application of these principles to actual problems of design and construction.

505. Textiles. Three credit hours. One Quarter. Autumn, Winter, Spring. Two one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Home Economics 430. Miss Turnbull.

A study of the characteristics of textile products and the extent to which fiber and processing determine these characteristics. Some study of labeling of textiles and textile testing by simple tests.

Not open to students who have credit for Home Economics 401.

506. Household Equipment. Five credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour class meetings and two two-hour laboratory periods each week. Miss Beard.

A study of the principles involved in the selection, construction, operation, and care of household equipment and its relation to the well-being of the family.

507. Needle Crafts. Two credit hours. One Quarter. Autumn and Spring. Two two-hour laboratory periods each week. For Home Economics and Occupational Therapy majors. Open to others with consent of the instructor.

Application of principles of design. Opportunity to work in a variety of needle crafts.

512. Home Furnishing. Five credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour class meetings and two two-hour laboratory periods each week. Prerequisite, Fine Arts 430 or 431, Home Economics 430 or 508. Engineering Drawing 538 is recommended as a preceding or concurrent course. Miss Heiner.

A study of the application of the principles of art to home furnishing with a consideration of economic and social factors affecting choice.

513. Furnishing the Home. Three credit hours. One Quarter. Autumn and Spring. Two one-hour class meetings and one two-hour laboratory period each week. A course planned primarily for non-majors in home economics. Credit will not be given for both Home Economics 512 and Home Economics 513. Miss Heiner.

A study of problems in furnishing the home. Emphasis is placed on consideration of needs and available resources of the family and the importance of intelligent planning in the selection, combination, and the use of furnishings.

514. Clothing; Elementary Construction. Three credit hours. Autumn and Spring Quarters. Three two-hour laboratory periods each week. Planned for students majoring in Occupational Therapy. Not open to students in Home Economics.

This course deals with problems of elementary garment construction.

515. Clothing; Children's Clothing. Three credit hours. Winter Quarter. One one-hour class meeting and two two-hour laboratory periods each week. Prerequisite, Home Economics 431, 561 or consent of the instructor.

The selection, design and construction of children's clothing in relation to the developmental needs of children. Meeting children's needs with due consideration of the management of time, energy and income.

518. Elements of Homemaking. Five credit hours. Autumn Quarter. Five class meetings each week. A course planned for non-majors in home economics. Credit will not be given for both Home Economics 518 and Home Economics 560. Elective to Juniors and Seniors. This course is of equal interest to men and women. Miss Urban.

A non-technical course in which the principles of home management are introduced and the use of the resources of the family is studied in their relation to family well-being.

526. Diet in Disease. Three credit hours. One Quarter. Autumn and Spring. Three class meetings each week. Open only to students following the Nursing Curriculum. Prerequisite, Home Economics 410 and Nursing 410. Mrs. Lewis.

Adaptations of normal diet to pathological conditions affecting or affected by the utilization of food.

Not open to students who have credit for Home Economics 426.

540. The Teaching of Home Economics. Three credit hours. Winter Quarter. Three class meetings each week. Not open to students following a major program preparing for the teaching of home economics but required for students meeting minimum certification requirements for a home economics teaching minor. Prerequisite, fifteen Quarter-credit hours in home economics courses. Mrs. Pressey.

A course designed to acquaint the student not majoring in home economics education with problems and methods concerned in teaching high school students.

541. Principles and Methods of Teaching Applied to Home Economics. Five credit hours. One Quarter. Autumn, Winter, Spring. Two one-hour and one two-hour class meetings and one-half day for observation each week. Prerequisite, twenty-five Quarter-credit hours in home economics courses and Education 533. Miss Bancroft.

Consideration of curriculum, methods of teaching, management, and other problems of the home economics teacher.

543. School-Community Problems of the Home Economics Teacher. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Hours for observation and participation to be arranged. Students preparing to teach vocational home economics in secondary schools should schedule this course concurrently with Home Economics 542. Prerequisite, Home Economics 541. Mrs. Pressey.

Consideration of the responsibilities and activities of the home economics teacher in the extended school program. Such topics as the following are included: techniques for leadership in adult education programs; methods for promoting and vitalizing home and work experience; and suggestions for guiding home economics club work.

550. Foods: Meal Management. Three credit hours. One Quarter. Autumn, Winter, Spring. One one-hour class meeting and two three-hour laboratory periods each week. Prerequisite, Home Economics 441. Mrs. Wertenberger.

The function of this course is to assist the student in developing some ability in planning, preparing and serving palatable, nutritious and attractive meals for families at various economic levels. The use and care of equipment and table appointments will be included.

Not open to students who have credit for Home Economics 614.

551. Nutrition: Family. Three credit hours. One Quarter. Autumn, Winter, Spring. Two one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Home Economics 440 or the equivalent. Miss Donelsen, Miss Green, Miss Hughes.

A study of some fundamental principles of human nutrition and their application to the feeding of adults and children in typical families.

Not open to students who have credit for Home Economics 611.

559. Household Buying. Five credit hours. One Quarter. Autumn, Winter, Spring. Four one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Economics 401, 402 and Home Economics 430 and 440. Miss Newark.

A study of the market from the family point of view. Application of some basic principles of selection and buying to specific problems related to the purchase of food, textiles, furnishings, and equipment for the household.

560. Home Management. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Economics 402 and twenty Quarter-credit hours in home economics courses. Required of all students majoring in home economics. Miss Newark, Miss Urban.

A study of the management of the various resources available to the family with a view to promoting family well-being and satisfaction.

Not open to students who have credit for Home Economics 518 or 626.

561. Introduction to Child Development. Three credit hours. One Quarter. Autumn, Winter, Spring. Three one-hour class meetings each week and two morning hours each week for nursery school observation to be arranged. Prerequisite, Psychology 401. A preceding course in nutrition is recommended. Required of all students majoring in home economics. Miss Heye, Miss Lane.

This course considers methods of meeting the fundamental needs of children at all levels of development, and attempts to acquaint the student with the outstanding characteristics of development.

Not open to students who have credit for Home Economics 621.

570. Introduction to Institution Food Management and Service. Three credit hours. One Quarter. Autumn and Winter. One one-hour class meeting

and two three-hour laboratory periods each week. Prerequisite, Home Economics 550. Miss Wood.

This course is planned to introduce students to the field of institution management, and to provide experience in preparing and serving food in quantity and in record keeping concerned with food production in a well-managed small institution kitchen. Time will be given to discussion of equipment, organization and management of small lunchrooms, including school lunchrooms.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Clothing. Five credit hours. One Quarter. Autumn and Spring. Two one-hour class meetings and three two-hour laboratory periods each week. Prerequisite, Home Economics 503. Miss Ryan.

Application of the principles of designing through draping and tailoring. Opportunity is provided for handling a variety of fabrics in construction problems.

***604. Clothing.** Three credit hours. Home Economics 503, experience in teaching clothing, or consent of instructor.

Group and individual studies of problems growing out of the current needs expressed by teachers. Problems are related primarily to garment construction.

610. Nutrition. Three credit hours. Winter Quarter. Two one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Home Economics 441, 551, Physiology 403, and Agricultural Chemistry 403 prerequisite or concurrent. Miss Donelson.

A consideration of recent human nutrition studies as they relate to modern concepts of nutrition. Some participation in feeding problems of the community.

612. Nutrition: Diet Therapy. Five credit hours. Spring Quarter. Three two-hour class meetings each week, other hours to be arranged. Prerequisite, Home Economics 610 or equivalent. Miss Donelson.

Study of modern concepts of clinical nutrition in connection with abnormal conditions in which diet is an important part of the treatment.

615. Experimental Work in Food Preparation. Five credit hours. Winter Quarter. Two one-hour class meetings and three three-hour laboratory periods each week. Prerequisite, Home Economics 412 or 441 and Agricultural Chemistry 402. Miss Green, Miss Hughes.

Individual projects in the application of experimental methods to problems involved in the preparation of foods.

619. Household Equipment. Three credit hours. Autumn Quarter. Two one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Home Economics 506. Home Economics 512 is recommended as a concurrent or preceding course. Miss Davis.

Application to home situations of the recent developments in lighting, with special emphasis on selection, care, and use of home lighting equipment.

622. Household Equipment: Performance Testing. Five credit hours. Winter Quarter. Two one-hour class meetings and three two-hour laboratory periods each week. Prerequisite, Home Economics 506, fifteen Quarter-credit hours in natural science and twenty additional Quarter-hours in home economics. Miss Davis.

Experimental problems on the performance of the major types of household equipment used in preparation of food, laundering and cleaning.

627. Laboratory in Home Management. Five credit hours. One Quarter. Autumn, Winter, Spring. Five hours of group conferences and scheduled laboratory each week and other laboratory hours to be arranged. Prerequisite, Home Economics 506 or 450, 550, 626 or 560 and 561. Miss Urban.

An application of the principles presented in other courses. Each student is provided with an opportunity to study the management of one or more homes, the needs of the student being considered.

* Not given in 1947-1948.

628. Selection of Furnishings for the Home. Three credit hours. Winter Quarter. Two one-hour class meetings and one two-hour laboratory period each week. Prerequisite, Economics 402 and Home Economics 512. Miss Heiner.

A study of the consumers' problems in the selection of home furnishings. Field work is arranged with retail merchants.

635. Foods. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, Home Economics 441 and 551, or the equivalent. Miss Green.

This course considers the recent important contributions of research relative to the preparation and preservation of foods.

661. Child Development. Three credit hours. One Quarter. Autumn, Winter, Spring. Two class meetings each week and four morning hours to be arranged. Prerequisite, Home Economics 561 and fifteen Quarter-credit hours of social science. Students not majoring in home economics may, with the consent of the instructor, substitute other courses related to the study of young children and family relations. Miss Heye.

Application of the principles of child development to actual work with pre-school children. Appropriate guidance technique will be discussed and used.

670. Clothing: Fashion. Three credit hours. Winter Quarter. Three class meetings each week. Prerequisite, ten Quarter-credit hours in Fine Arts and Home Economics (Textiles and Clothing) and ten Quarter-credit hours in economics, sociology, or history. Miss Mauck.

A study of the origin and development of the fashion movement and its relation to the manufacturing and consumption of textiles and clothing. An analysis of sources of current fashion information; of methods and practices used in style coordination; of fashion trends and their effect on the markets and the consumer.

671. Textiles. Three credit hours. Spring Quarter. One one-hour class meeting and two two-hour laboratory periods each week. Prerequisite, ten Quarter-credit hours in home economics, including Home Economics 401 or 505 and ten Quarter-credit hours of natural science. Miss Petzel.

In this course the student will gain experience in planning and conducting textile tests and in evaluating the resulting data. Fibers, yarns, fabrics, and finishing agents will be studied in relation to probable durability and serviceability. Some consideration will be given to the development, present status, and importance of textile testing.

Not open to students who have credit for Home Economics 602, for five hours, but open to those who have had the course for three credit hours only.

672. Textiles: Historic. Three credit hours. Spring Quarter. Three class meetings each week. Prerequisite, Home Economics 401 or 505, one course in Fine Arts, and ten Quarter-credit hours in social science. Miss Petzel.

The development of textiles from the prehistoric to the modern age. Correlation of design, production and use. Contemporary cultural forces in relation to the evolution of textiles.

701. Special Problems in Home Economics. One to fifteen credit hours. To be given in units of five hours for one quarter. Autumn, Winter, Spring. One conference or more each week. Prerequisite, graduate standing or senior standing with an accumulative point hour average of 2.7 or above. Students must have at least six Quarter credit hours in the area of home economics in which the problem is to be taken. For graduate students problems must be in major or minor fields.

Problems in various phases of home economics chosen for individual study. Groups will be organized as follows:

- (a) Problems in food preparation. Autumn, Winter, Spring. Miss Green, Miss Hughes.
- (b) Problems in nutrition and dietetics. Autumn, Winter, Spring. Miss Donelson, Miss Hughes, Mrs. Lewis.
- (c) Problems in textiles. Autumn, Winter, Spring. Miss Petzel, Miss Turnbull.
- (d) Problems in clothing. Autumn, Winter, Spring. Miss Mauck, Miss Ryan.
- (e) Problems in home furnishing. Winter Quarter. Miss Heiner.
- (f) Problems in household equipment. Spring Quarter. Miss Davis.
- (g) Problems in home management. Autumn and Winter Quarters. Miss Newark.
- (h) Problems in institution management, equipment, and food buying. Autumn, Winter, Spring. Miss Kyle, Miss Wood.

- (i) Problems in teaching home economics. Autumn, Winter, Spring. Mrs. Pressey, Miss Scott.
- (j) Problems in child development. Autumn and Spring Quarters. Miss Heye.

740. Home Economics in American Education. Two credit hours. Autumn Quarter. Two class meetings each week. Prerequisite, Home Economics 541 or equivalent, teaching experience in home economics and consent of the instructor. Miss Lehman, Miss Scott.

An overview of the field of home economics in American education at the elementary, secondary, higher education and adult levels. General trends in enrollment, curriculum and guidance, supervision, administration and research as background for advanced work in home economics education.

741. The Teaching of Home Economics. Three credit hours. Winter Quarter. Prerequisite, Home Economics 740 and consent of instructor. Mrs. Pressey, Miss Scott.

The influence of the newer movements in secondary education on home economics. The place of home economics in the experimental secondary school programs and in such developments as integrated and unified educational offerings, core courses, and special home economics courses from a functional point of view.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

HYGIENE

(See Physical Education)

INDUSTRIAL ARTS

(See Industrial Engineering)

INDUSTRIAL ARTS EDUCATION

(See Education)

INDUSTRIAL ENGINEERING

Office, 125 Industrial Engineering Building

PROFESSORS LEHOCZKY, EDMONDSON, AND RICKLY, ASSOCIATE PROFESSOR STANTON, ASSISTANT PROFESSORS SCHNEIDER AND MOORE, MR. FOUST, MR. VEIRS, AND ASSISTANTS

404. Foundry Practice. Three credit hours. Winter Quarter. Six hours of lecture and laboratory work each week. Prerequisite, second year standing in the College of Education or written permission from the chairman of the Department of Industrial Engineering. Mr. Schneider.

A course designed primarily for students who expect to enter the Industrial Arts teaching field. Special consideration will be given to molding and casting of brass, bronze, aluminum, magnesium, copper, and light gray iron castings. Laboratory practice in bench, floor and machine molding; plaster molding, non-ferrous furnace and cupola operation; core making. Foundry materials: sands, clays, facings, fluxes, and core binders.

Not open to students in the College of Engineering.

Not open to students who have credit for Industrial Engineering 405.

415. Forging, Heat Treating, and Welding. Three credit hours. Spring Quarter. Six hours of laboratory and lecture each week. Practice in the principles of heat treating; forge, oxyacetylene, and electric welding.

The work in this course is designed to aid students preparing to teach industrial arts, to achieve skills, procedure and information necessary for teaching these subjects at the secondary level.

Open only to students in the College of Education.

Not open to students who have credit for Industrial Engineering 418.

420. Machine Shop Practice. Five credit hours. Autumn Quarter. Ten hours of lecture or laboratory work each week. Prerequisite, second year standing in the College of Education or written permission from the chairman of the Department of Industrial Engineering. Mr. Rickly, Mr. Moore and others.

Laboratory practice on the basic machine tools such as the lathe, planer, shaper, and so forth. The course is designed to enable the student to acquire operating skill and operating technique.

Not open to students in the College of Engineering.

Not open to students who have credit for Industrial Engineering 419.

For additional courses in Industrial Engineering, see the Bulletin of the College of Engineering.

ITALIAN

(See Romance Languages and Literatures)

JOURNALISM

Office, 203 Journalism Building

PROFESSORS POLLARD AND LUXON, ASSOCIATE PROFESSORS GETZLOE AND WAGNER, ASSISTANT PROFESSOR HARSHA, MR. O'BRIEN, MR. PAULY

401. Introduction to Journalism. Two credit hours. One Quarter. Autumn, Winter, Spring. Not open to Freshmen. Required of all journalism majors. Mr. Getzloe, Mr. Wagner.

An introduction to journalism, particularly the modern newspaper. The functions of the newspaper and allied fields: radio, magazines, public relations, advertising. Study of outstanding and representative newspapers. Readings and written reports.

402. Elementary Reporting. Four credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and one laboratory period each week on the *Lantern*. Prerequisite, Journalism 401. Mr. Getzloe, Mr. Wagner.

An introduction to the work of the beginner in journalism. Study of and practice in the gathering and writing of news. Students report all types of campus news, including meetings and speeches. News stories in contemporary newspapers are read, discussed, and analyzed.

403. Advanced Reporting. Five credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and two laboratory periods each week. Prerequisite, Journalism 402. Mr. Getzloe, Mr. Wagner.

A continuation of Journalism 402. Interviews and special newspaper features. Emphasis on the work of the beat or departmental reporter and on the reporting of technical and scientific news.

Not open to students who have credit for Journalism 402 prior to October 1, 1946.

501. Copyreading. Four credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and one laboratory period each week on the *Lantern*. Prerequisite, Journalism 401-402. Mr. Pollard, Mr. Wagner.

Editing of copy, headline writing, re-writing, and general desk work; the development and maintenance of the newspaper library, including standard and special reference material, photographs, and cuts.

508. Technical News Writing. Three credit hours. One Quarter. Autumn, Winter, Spring. Open to Juniors and Seniors only. Mr. O'Brien.

A non-professional course in journalistic writing, designed especially for agricultural, technical, and professional students. Presuming no prior experience on the part of the student, it gives a brief survey of the field with elementary training in the gathering and writing of news and the writing of news-feature articles for trade and class publications. Emphasis is given to news in the agricultural, technical, professional, industrial, and business fields.

Not open to students who have credit for Journalism 401-402 or 602.

513. Newspaper Ethics and Principles. Three credit hours. One Quarter. Winter and Spring. Three recitations each week. Prerequisite, Journalism 401-402. Mr. Getzloe.

The rights and duties of the press, its morals, its standards, and its part in community, state, and national life.

517. History of Journalism in the United States. Five credit hours. Spring Quarter. Five recitations each week. Mr. Pollard.

Origin and growth of journalism in the United States, with consideration of its English beginnings. Notable editors and publishers and mutual influence of the press and democracy.

519. Newspaper Typography and Printing. Four credit hours. One Quarter. Autumn, Winter, Spring. Three recitations and one two-hour laboratory period each week. Permission of the instructor necessary. Mr. Harsha.

History of printing, with special application to the newspaper. Study of type faces commonly used in newspaper and advertising typography. Newspaper and other makeup. Survey of typesetting machinery, illustration processes, newspaper presses and allied equipment, paper and ink. Printing problems.

***525. The Weekly Newspaper.** Three credit hours. Winter Quarter. Three recitations each week. Given in alternate years.

A study of the special place and functions of the weekly newspaper, partly through examination of the weekly newspapers themselves. The proper relation of the weekly newspaper and the community.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

602. Magazine Writing and Editing. Five credit hours. One Quarter. Autumn and Winter. Four lectures and recitation periods and one laboratory period each week. Prerequisite, permission of the instructor. Mr. Getzloe.

Instruction in and writing of articles for magazines of general circulation and for trade, class, and technical journals. Problems of magazine management, editing, and production.

617. Public Relations. Three credit hours. Autumn Quarter. Three class meetings each week. Permission of the instructor necessary. Mr. Pollard.

Study of public relations problems, policies and practices of welfare and professional organizations, educational and other institutions, industry, commerce and government agencies. A study of the manner in which these organizations make their activities known and how they can most effectively use the media of publicity, the press especially. Organizing of publicity projects and campaigns and their effect on public opinion and action.

621. The Editorial Page. Three credit hours. One Quarter. Autumn and Spring. Three recitations each week. Mr. Getzloe.

Study of the purpose, form, style, and spirit of the editorial. Consideration of current events, practice in news interpretation and other editorial writing, and study of editorial pages.

622. The Press and Contemporary Affairs. Three credit hours. One Quarter. Autumn and Winter. Three recitations each week. Mr. Pollard.

The place of the newspaper in the social system. Study of its function and nature as an agency affecting public opinion. Discussion and interpretation of current events. The effects of pressure groups and propaganda upon the press.

LATIN LANGUAGE AND LITERATURE (See Classical Languages and Literature)

MANUAL ARTS (See Education)

* Not given in 1947-1948.

MATHEMATICS
Office, 306 University Hall

PROFESSORS RADO, BLUMBERG, AND BAMFORTH, ASSOCIATE PROFESSORS MANN, HALL, AND CHATLAND, ASSISTANT PROFESSORS BARFIS (EMERITUS), BEATTY, CARIS, RICKARD, JONES, MICKLE, HELSEL, AND ALDEN, MR. MILLER, MR. HARP, MRS. ALDEN, MRS. BELL, MR. REICHELDERFER, MR. SWAIN, ASSISTANT INSTRUCTORS AND ASSISTANTS

The following sequences in mathematics are recommended:

I. For those preparing to teach mathematics in secondary schools and junior colleges:

(1) 421, 422, 423, 441, 442, 621, 623, 641.

(2) Education 687 (Teaching of Mathematics).

II. Those preparing to teach in colleges and universities, or to work in the more advanced fields of mathematics, should complete the sequence 421, 422, 423, 441, 442, 443, and then consult with members of the department with reference to electives. It is recommended that all students intending to proceed later to graduate work in mathematics, acquire before graduation a reading knowledge of French and German.

III. For elementary work in statistics and finance:

421, 429, 435

IV. For advanced statistical work:

First year: 421, 422, 423

Second year: 441, 442, 443

Third year: 435, 601, 607

Fourth year: 691, 692, 696

PLACEMENT AND PROFICIENCY EXAMINATIONS

In order to insure that students may not enter courses for which they are insufficiently prepared or courses in which they are already proficient, placement and proficiency examinations are held at the beginning of each Quarter. To enroll in Mathematics 421 a student must have at least one year of high school algebra and one year of high school geometry. Students enrolled in Mathematics 421 will take a placement examination at the end of the first week of the Quarter. The examination will cover the content of the one unit of high school algebra which is known at Ohio State as Mathematics 401. Those students who do not receive a passing grade in the placement examination will be transferred from 421 to 401. Proficiency examinations in Mathematics 421, 422, 423, 441, 442, 443 will be given at 8 A. M. on the first Saturday of each Quarter in the Office of the Department of Mathematics. To pass a proficiency examination in any one of the courses 421, 422, 423, 441, 442, 443, a grade of A or B is necessary and either of these grades carries with it an Em credit of five hours provided this does not raise the total Em credit of the student above thirty credit hours. Brief syllabuses are given below; more detailed information may be obtained from the Department of Mathematics.

401. Elementary Algebra. Five credit hours. One Quarter. Autumn, Winter, Spring. Five hours will be added to the total hours required in the program of the Freshman and Sophomore years of any student taking this course. All instructors.

This course is designed for students entering the University without having had high school algebra, and for those students who failed the proficiency examination which is prerequisite to Mathematics 421. The following topics are covered: signed and literal numbers, fractions, factoring, graphs, simultaneous equations, quadratic equations. A tutorial fee of \$5.00 will be charged for this course.

404. Plane Geometry. Five credit hours. One Quarter. Autumn, Winter, Spring. All instructors.

Those portions of elementary plane geometry covered in one unit of entrance plane geometry. This includes congruent triangles, parallels, perpendiculars, construction of triangles, areas, chords and tangents to circles, loci, concurrences, similar triangles and polygons, proportions. A tutorial fee of \$5.00 will be charged for this course.

406. Solid Geometry. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Prerequisite, Mathematics 404 or the equivalent. All instructors.

This course is offered for those students who did not take Solid Geometry in high school but need it as a prerequisite for their course of study. The course includes selections from the following topics: Lines and planes in space; dihedral and polyhedral angles; various three-space figures, such as prisms, cylinders, pyramids, cones, spheres, and general polyhedrons.

421. College Algebra. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 401, 404 or the equivalent. All instructors. Exponents and radicals, graphs, theory of quadratic equations, determinants of third and fourth orders, ratio, proportion, variation, logarithms, arithmetic progressions, geometric progressions, compound interest and annuities, permutations, combinations, binomial theorem, probability, partial fractions.

422. Trigonometry. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 421. All instructors. Trigonometric functions and their graphs, functions of sum and difference of angles, equations and identities, formulas for solution of triangles, calculations using logarithmic tables. Complex numbers and their representation in a plane. Demoivre's theorem. Elements of spherical trigonometry.

423. Analytic Geometry. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Mathematics 422. All instructors. Cartesian and polar coordinates in the plane, equations of line, circle, parabola, ellipse, hyperbola, simpler facts about general equation of the second degree. Elements of solid analytic geometry, including direction cosines, equations of planes, lines, spheres, paraboloids, ellipsoids, and hyperboloids in simplest form.

429. Mathematics of Finance. Five credit hours. Winter Quarter. Prerequisite, Mathematics 421. Mr. Whitney. The principles of interest and discount with applications to annuities, sinking funds, capitalization, depreciation, valuation of bonds, building and loan associations.

435. Elementary Mathematical Statistics. Five credit hours. Spring Quarter. Prerequisite, Mathematics 421 or permission of the instructor. Mr. Whitney. Methods of testing hypotheses and estimation, chi-square test, t test, analysis of variance test. Estimation of mean, variance, correlation, and partial correlation coefficients; methods of sampling.

441-442-443. Calculus. Five credit hours each Quarter. Each course is given in Autumn, Winter, Spring. Prerequisite, Mathematics 423. All instructors.

***490. Freshman Refresher.** No credit hours. One Quarter. Autumn, Winter, Spring. This course reviews the work of Mathematics 421, 422, 423, and is intended to aid returning veterans in their adjustment to the regular courses in mathematics.

***491. Sophomore Refresher.** No credit hours. One Quarter. Autumn, Winter, Spring. This course reviews the work of Mathematics 441, 442, 443, and is intended to aid returning veterans in their adjustment to the regular courses in mathematics.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Advanced Calculus. Five credit hours. Autumn Quarter. Prerequisite, Mathematics 443. Mr. Mickle. The theory of limits, functions, continuity; definition and meaning of ordinary and partial derivatives; definition of definite integrals, proper and improper; fundamental theorem of the integral calculus; functions defined as integrals containing a parameter; mean value theorems; convergence of series; power series; implicit functions.

611. Differential Equations. Five credit hours. Spring Quarter. Prerequisite, Mathematics 443. Mr. Helsel. Equations of first and second orders; linear equations with constant coefficients; solutions in series; numerical approximations; the existence theorem of Picard; systems of ordinary equations; the Legendre and Bessel equations with certain applications.

* Not given in 1947-1948.

***617. Introduction to Modern Mathematics.** Five credit hours. Autumn Quarter. Prerequisite, ten credit hours in mathematics beyond Mathematics 443, or permission of the instructor. Mr. Blumberg.

The purpose of this course is to introduce the student to some of the important conceptions and methods developed in Mathematics during the past century. Illustrative material will be selected from such fields as graphical and numerical methods, projective geometry, the theory of the irrational, point sets, groups, probability and relativity.

621. Advanced Geometry. Five credit hours. Autumn Quarter. Prerequisite, Mathematics 442. Miss Bareis.

This course is designed primarily for students in the College of Education. Emphasis is placed on clarity of expression and logical structure. Topics are selected from the following list: points, lines, and circles connected with a triangle, concurrency and collinearity, vector geometry, mean centers, harmonic properties, quadrilaterals, orthogonal circles, inversion, poles and polars, coaxial circles, orthogonal and conical projection, basic ideas of non-Euclidean geometry.

623. Projective Geometry. Five credit hours. Spring Quarter. Prerequisite, Mathematics 442. Mr. Rado.

Plücker line coordinates, duality, infinite elements, projection, double ratio, projective coordinates in one and two dimensions, projective transformations, collineations and involutions in one dimension, projective properties of conics.

***625. Solid Analytical Geometry.** Five credit hours. Autumn Quarter. Prerequisite, Mathematics 443.

Systems of coordinates; planes and lines; types of surfaces; quadric surfaces; duality.

641. Theory of Equations. Five credit hours. Winter Quarter. Prerequisite, Mathematics 442. Mr. Hall.

Algebraic solution of cubic and quartic equations; approximate determination of irrational roots of polynomials by Horner's and Newton's methods; isolation of roots by methods of Sturm; theory of determinants and applications to linear equations; constructions by ruler and compass; symmetric functions; elementary treatment of real and complex numbers.

†651. Fundamental Ideas in Algebra and Geometry. Three credit hours. Autumn Quarter. Prerequisite, Mathematics 441-442 or the permission of the instructor. Mr. Mann.

The aim of this course is to provide a suitable mathematical background for teachers and prospective teachers of secondary school mathematics. The content will include a discussion of rational numbers, real numbers, complex numbers, and finite fields; finite groups, theory of numbers; number scales; empirical and historical development of algebraic and geometric facts; undefined elements; types of assumptions used in algebra and geometry; Euclidean geometry; and certain non-Euclidean geometries.

***652. Fundamental Ideas in Algebra and Geometry.** Three credit hours. Winter Quarter. Prerequisite, Mathematics 651 or the permission of the instructor.

A continuation of Mathematics 651.

***653. Fundamental Ideas in Algebra and Geometry.** Three credit hours. Spring Quarter. Prerequisite, Mathematics 652 or the permission of the instructor.

A continuation of Mathematics 652.

***654. Elementary Applied Mathematics.** Five credit hours. Spring Quarter. Prerequisite, Mathematics 442.

This course is designed primarily for students in the College of Education. Its purpose is to show how mathematical techniques are applied to practical problems and to give confidence and skill in the translation of a word-problem into mathematical language. Applications to elementary probability and mechanics are included.

Not open for graduate credit.

661. Vector Analysis. Five credit hours. Winter Quarter. Prerequisite, Mathematics 601 and Physics 433, or the equivalent. Mr. Chatland.

The algebra and calculus of vectors; applications to mechanics. Partial differential operators, transformation theorems for integrals. An introduction to the theory of the electrostatic potential.

* Not given in 1947-1948.

† Not given during the academic year, 1947-1948.

***692. Finite Differences.** Five credit hours. Winter Quarter. Prerequisite, Mathematics 601 and 611. Mr. Mann.

An introduction to finite differences; development of the more important methods of interpolation and summation.

731. Probability and Statistics. Five credit hours. Autumn Quarter. Prerequisite, Mathematics 601. Mr. Mann.

Combinatorial probability. Non-parametric tests. The binomial, multinomial, and Poisson distribution laws. Distribution functions. Riemann-Stieljes integrals. Moments and characteristics function. The limit theorems of probability. Derivations of the distribution of test statistics. Applications.

732. Theory of Statistical Inference. Five credit hours. Winter Quarter. Prerequisite, Mathematics 731. Mr. Mann.

Theory of testing hypotheses and estimation. The power of a test. Most powerful and asymptotically most powerful tests. Maximum likelihood estimates, consistency, sufficiency and efficiency of an estimate. Methods of least squares. Statistical inference from non-experimental data.

733. Statistics: Design and Analysis of Experiments. Five credit hours. Spring Quarter. Prerequisite, Mathematics 732. Mr. Mann.

The analysis of variance distribution. Likelihood ratio tests. Tests of linear hypothesis. Analysis of variance in an r -way classification. Non-orthogonal data. Randomized blocks, Latin squares, incomplete balanced blocks, lattices and lattice squares.

***752. Introduction to the Theory of Relativity.** Five credit hours. Spring Quarter. Prerequisite, Mathematics 751 or permission of instructor. Mr. Blumberg.

Historical sketch; the Lorentz group; dynamics of Special Relativity; tensors, significant features of General Relativity.

Not open to students who have credit for Mathematics 671.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 687.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

METEOROLOGY

(See Geology 420)

MILITARY SCIENCE

Office, Military Science Building

COLONEL MARCH AND STAFF AS ORDERED BY THE WAR DEPARTMENT

In accordance with the Morrill Act, passed in 1862, under which the University was established, military instruction must be included in the curricula. The Board of Trustees therefore requires all male students, both special and regular, unless excused by the Department of Military Science, to receive military instruction during the first two years of residence.

The Reserve Officers' Training Corps was established at the University by the War Department to produce junior officers who have the qualities and attributes essential to their progressive and continued development as officers in the Army of the United States. Its program of instruction consists of two parts, the elementary course extending over a period of two years, and the advanced course, extending over a similar period. Instruction is under the direction of officers and non-commissioned officers detailed to the University for that purpose.

Students at this institution, required to receive military instruction, will pursue the elementary course, ROTC, but not necessarily as formally enrolled members of the ROTC. They are eligible for formal enrollment in the ROTC if they are citizens of the United States; physically qualified; regularly enrolled students in the University; over fourteen years of age, and not over

* Not given in 1947-1948.

twenty-three; and have successfully completed the ROTC general survey test. Admission to the ROTC is voluntary. Two credit hours are allowed for each Quarter of the elementary course. Successful completion of the elementary course, ROTC, is a prerequisite for the advanced course.

All Freshman and Sophomore male students are required to take military training except those enrolled in the Colleges of Dentistry, Law, and Medicine, and in the Naval ROTC. There are certain additional exemptions, to be determined by the Department of Military Science, which are granted for the following reasons:

1. Over twenty-five years of age.
2. Not physically fit for ROTC.
3. Alien status.
4. Prior equivalent military training or service.
5. Commissioned officers of the Officers' Reserve Corps, or the National Guard.

Enrollment in Military Science, or formal enrollment in the elementary course, ROTC, has no effect on a student's status under the Selective Service Law, except that the Professor of Military Science may grant certificates of eligibility for entrance to an officer candidate school to those especially qualified students who have:

- (1) Completed the elementary course, ROTC.
- (2) Completed two years of college study.

The elementary course, ROTC, consists of three hours per week of formal instruction of a general type applicable to the Army as a whole and is not specialized as to arm or service except in the case of the Medical course. It extends over a period of two academic years. The advanced course consists of five hours of military instruction, principally of a specialized type applicable to the Field Artillery, Signal Corps, Engineer Corps, Air Force, and Chemical Corps. The Medical Corps advanced course includes one hour of formal military instruction and four of required medical subjects. All students formally enrolled in the advanced course, ROTC, must not have reached twenty-seven years of age at the time of enrollment; must execute a written agreement with the government; must have completed the elementary course or its equivalent; and must have completed the elementary course or its equivalent; and must have been selected by the Professor of Military Science and Tactics and the President of the University.

The service-type uniform is provided for issue to students enrolled in Military Science. At the time the uniform, equipment, and textbooks are issued, the student is required to make a deposit of approximately \$28.00. This deposit is returned to the student when the uniform, and other items issued, have been returned to the Supply Room.

Advanced course students are provided with the officer type uniform and are paid a monetary allowance monthly in lieu of the ration. A student enrolled in the advanced course, ROTC, agrees to complete the course and attend the ROTC summer camp. Students attending ROTC summer camps are messed and quartered and paid at the rate of soldiers of the seventh grade.

Membership in the University Band is open to Freshmen and Sophomores who are selected by the School of Music. The work is conducted jointly by the School of Music and the Department of Military Science. The combined training is conducted so as to enable bandmen to obtain credit for two years required military training.

The total credits in this department allowed toward a degree, except for the Medical ROTC, are eighteen, exclusive of the elementary course, required of all male students in the first and second years, for which twelve credit hours are granted. The credits allowed toward a medical degree are one for each Quarter.

Enrollment in the advanced course, Engineer Corps ROTC, will be confined to students taking Architectural, Chemical, Civil, Electrical, Mechanical, Mining, Sanitary, or Industrial Engineering. Engineering students who intend to take Electrical Engineering or Electrical Physics, or students majoring in Physics, are eligible for the advanced course Signal Corps, ROTC unit. The advanced course Chemical Corps unit is confined to students taking Mechanical or Chemical Engineering, Accounting, or Law. The Medical Corps ROTC unit is confined to students enrolled in the College of Medicine. Students seeking enrollment in the Air Force ROTC unit, or the Field Artillery ROTC unit may be enrolled in any college except the College of Medicine. Students having successfully completed the advanced course, ROTC, and four years of education at the University, and who are twenty-one years of age, are eligible for a commission as a second lieutenant in the Officers' Reserve Corps. A professional degree is a requirement for a commission as a first lieutenant in the Medical Corps.

ELEMENTARY MILITARY SCIENCE

Formal instruction applicable to the Army as a whole. One one-hour and one two-hour classes each week.

421. Elementary Military Science. Two credit hours. Autumn Quarter. First year. Required of all male students unless excused.

422. Elementary Military Science. Two credit hours. Winter Quarter. First year. Required of all male students unless excused.

423. Elementary Military Science. Two credit hours. Spring Quarter. First year. Required of all male students unless excused.

424. Elementary Military Science. Two credit hours. Autumn Quarter. Second year. Required of all male students unless excused.

425. Elementary Military Science. Two credit hours. Winter Quarter. Second year. Required of all male students unless excused.

426. Elementary Military Science. Two credit hours. Spring Quarter. Second year. Required of all male students unless excused.

ADVANCED FIELD ARTILLERY

Three one-hour and one two-hour classes each week.

527. Advanced Field Artillery. Three credit hours. Autumn Quarter. Prerequisite, Military Science 421, 422, 423, 424, 425, 426, or equivalent training.

528. Advanced Field Artillery. Three credit hours. Winter Quarter. Prerequisite, Military Science 527.

529. Advanced Field Artillery. Three credit hours. Spring Quarter. Prerequisite, Military Science 527 and 528.

530. Advanced Field Artillery. Three credit hours. Autumn Quarter. Prerequisite, Military Science 527, 528, and 529.

531. Advanced Field Artillery. Three credit hours. Winter Quarter. Prerequisite, Military Science 527, 528, 529, and 530.

532. Advanced Field Artillery. Three credit hours. Spring Quarter. Prerequisite, Military Science 527, 528, 529, 530, and 531.

ADVANCED ARMY AIR FORCE

Three one-hour and one two-hour classes each week.

533. Advanced Army Air Force. Three credit hours. Autumn Quarter. Prerequisite, Military Science 421, 422, 423, 424, 425, and 426.

534. Advanced Army Air Force. Three credit hours. Winter Quarter. Prerequisite, Military Science 533.

535. Advanced Army Air Force. Three credit hours. Spring Quarter. Prerequisite, Military Science 533 and 534.

536. Advanced Army Air Force. Three credit hours. Autumn Quarter. Prerequisite, Military Science 533, 534, and 535.

537. Advanced Army Air Force. Three credit hours. Winter Quarter. Prerequisite, Military Science 533, 534, 535, and 536.

538. Advanced Army Air Force. Three credit hours. Spring Quarter. Prerequisite, Military Science 533, 534, 535, 536, and 537.

ARMORED CAVALRY

Three one-hour and one two-hour classes each week.

The Armored Cavalry is open to students enrolled in any recognized field.

541. Advanced Armored Cavalry. Three credit hours. Autumn Quarter. Prerequisite, Military Science 421, 422, 423, 424, 425, and 426.

542. Advanced Armored Cavalry. Three credit hours. Winter Quarter. Prerequisite, Military Science 541.

543. Advanced Armored Cavalry. Three credit hours. Spring Quarter. Prerequisite, Military Science 541 and 542.

544. Advanced Armored Cavalry. Three credit hours. Autumn Quarter. Prerequisite, Military Science 541, 542, and 543.

545. Advanced Armored Cavalry. Three credit hours. Winter Quarter. Prerequisite, Military Science 541, 542, 543, and 544.

546. Advanced Armored Cavalry. Three credit hours. Spring Quarter. Prerequisite, Military Science 541, 542, 543, 544, and 545.

ORDNANCE

Three one-hour and one two-hour classes each week.

The Ordnance course is open to students enrolled in any academic course of instruction leading to an engineering, technical, or scientific degree or demonstration of marked ability aptitude, and interest in technical fields of endeavor.

583. Advanced Ordnance. Three credit hours. Autumn Quarter. Prerequisite, Military Science 421, 422, 423, 424, 425, and 426, or equivalent training.

584. Advanced Ordnance. Three credit hours. Winter Quarter. Prerequisite, Military Science 583.

585. Advanced Ordnance. Three credit hours. Spring Quarter. Prerequisite, Military Science 583 and 584.

586. Advanced Ordnance. Three credit hours. Autumn Quarter. Prerequisite, Military Science 583, 584, and 585.

587. Advanced Ordnance. Three credit hours. Winter Quarter. Prerequisite, Military Science 583, 584, 585, and 586.

588. Advanced Ordnance. Three credit hours. Spring Quarter. Prerequisite, Military Science 583, 584, 585, 586, and 587.

TRANSPORTATION CORPS

Three one-hour and one two-hour classes each week.

The Transportation Corps is open to students enrolled in any recognized field.

593. Advanced Transportation Corps. Three credit hours. Autumn Quarter. Prerequisite, Military Science 421, 422, 423, 424, 425, and 426, or equivalent training.

594. Advanced Transportation Corps. Three credit hours. Winter Quarter. Prerequisite, Military Science 593.

595. Advanced Transportation Corps. Three credit hours. Spring Quarter. Prerequisite, Military Science 593 and 594.

596. Advanced Transportation Corps. Three credit hours. Autumn Quarter. Prerequisite, Military Science 593, 594, and 595.

597. Advanced Transportation Corps. Three credit hours. Winter Quarter. Prerequisite, Military Science 593, 594, 595, and 596.

598. Advanced Transportation Corps. Three credit hours. Spring Quarter. Prerequisite, Military Science 593, 594, 595, 596, and 597.

MUSIC

Offices, 1, 2, 3, and 4 Page Hall

The School of Music is a member of the National Association of Schools of Music

PROFESSORS WEIGEL, DIERCKS, LEEDER, AND M. E. WILSON, ASSOCIATE PROFESSORS DIERKER, GILLILAND, HARDESTY, HARDY, KOB, McBRIDE, SLAWSON, THOMAS AND WHITCOMB, ASSISTANT PROFESSORS FOUNTAIN, FREDERIC, HELD, JONES, KUEHEFUHS, LORA, McGINNIS, MOONEY, OWEN, STAIGER AND VAN LOON, MISS ANAWALT, MISS TURNER, MR. BRIGHTWELL, MISS CURTIN, MRS. KING, MR. LOWE, MR. MANCINELLI, MR. NEAR, MR. NEUMANN, MR. ROHRBOUGH, MR. WAKSER, MR. YANCICH, AND ASSISTANTS

According to University Regulations:

- a. Courses numbered 400 to 599 are open to undergraduate students.
- b. Courses numbered 600 to 799 are open to advanced undergraduates and graduate students.
- c. Courses numbered 800 and above are open to graduate students only.

THEORY AND COMPOSITION

400(X). Review of the Elements of Theoretical Music. No credit. All Quarters. Enrollment in this course by permission only following entrance examinations. Five recitations each week. Miss Anawalt, Miss Jones.

The fundamentals of musicianship, notation, sight singing, dictation, and applied music. This course is designed for and open only to students who fail the entrance examination, or who do not maintain satisfactory standards of work in Music 401.

401. Sight Singing and Ear Training. Three credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, passing of entrance examination. Required of all music majors and minors. Miss Anawalt, Miss Kuehefuhs, Mr. Kob, Miss Dierker, Mr. Fountain, Mr. Held, Mr. Lowe.

Ear training by means of melodic dictation and sight singing skills. The study of tone and rhythm, gaining power to visualize, sing, and write melodic phrases in all keys. Other ear training devices included, such as interval recognition. Elementary theory also included: scales, intervals, triads with correlated keyboard practice.

402. Intermediate Sight Singing and Dictation. Three credit hours. One Quarter. Autumn, Winter, Spring. Five recitations each week. Prerequisite, Music 401. Miss Anawalt, Miss Dierker, Mr. Fountain, Mr. Lowe, Mr. Held.

A continuation of Music 401 with material of increasing difficulty. Special emphasis is placed on individual skill in reading at sight one-, two-, three-, and four-part material with Latin syllables and with texts. Problems studied include syncopated rhythms, compound meter, bass clef, and use of chromatics.

403. Advanced Sight Singing and Dictation. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Music 402. Miss Anawalt, Miss Jones, Mr. Kob, Miss Kuehefuhs, Mr. Held.

More difficult problems in sight singing and melodic dictation, including modulation, five-four measure, changing measure, C clef, and a study of modal melody and of the use of medieval modes in folk literature and in modern music.

460. Harmony. Three credit hours. One Quarter. Winter and Spring. Three recitations each week. Prerequisite, Music 401. Miss Jones, Miss Kuehefuhs, Mr. Kob, Mr. Held.

A study of chord structure and chord quality and of the relationship of harmony to rhythm and form. (All harmony courses, 460, 461, 462, 528, 529, include harmonic dictation, analysis and keyboard harmony and correlation of these activities with the written work.) Music 460 covers the use of the tonic and dominant seventh chords and their inversion, use of non-chordal tones, etc.

461. Harmony. Three credit hours. One Quarter. Autumn and Spring. Three recitations each week. Prerequisite, Music 460. Miss Jones, Miss Kuehefuhs, Mr. Kob, Mr. Held.

A continuation of Music 460. Introduction of the subdominant and supertonic triads and seventh chords. Continued application in keyboard, dictation, analysis, and the written harmonization of melodies.

462. Harmony. Three credit hours. One Quarter. Autumn and Spring. Three recitations each week. Prerequisite, Music 461. Miss Kuehefuhs, Mr. Kob.

A continuation of Music 461. The use of all of the diatonic triads and seventh chords and their inversions. Common chord modulation to closely related keys. Small original compositions.

490. Sight Singing and Ear Training. Three credit hours. Summer Quarter. Five recitations each week. This course number may be used to satisfy requirements in Music 401, 402, and 403 and may be repeated for credit until the minimum requirements in the area have been met. Sections will be organized according to demand. Mr. Kob.

The study of sight singing and ear training at the levels indicated above.

528. Intermediate Harmony. Three credit hours. One Quarter. Spring. Three recitations each week. Prerequisite, Music 462. Miss Kuehefuhs, Mr. Kob. Modulation to remote keys. Idiomatic progressions. Figured bass. Introduction to chromatic harmony.

529. Advanced Harmony. Three credit hours. One Quarter. Autumn and Spring. Three recitations each week. Prerequisite, Music 528. Miss Kuehefuhs, Mr. Kob.

A detailed study of chromatic harmony.

530. Form and Analysis. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Music 529. Miss Kuehefuhs, Mr. Kob.

A study of the design and harmonic structure of simple and complex forms of music composition. Standard works analyzed.

Not open to students who have credit for Music 661.

590. Harmony. Three credit hours. Summer Quarter. Three recitations each week. This course number may be used to satisfy requirements in Music 460, 461, 462, 528, and 539 and may be repeated for credit until the minimum requirements in the area have been met. Sections will be organized according to demand. Prerequisite, Music 401. Miss Kuehefuhs, Mr. Kob.

The study of harmony at the levels indicated above.

630. Instrumentation. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Music 529. Mr. Whitcomb.

The study of the instruments of the orchestra and band together with the practical study of their use in small ensembles and elementary school instrumental organizations. A number of observations of elementary school organizations and some analysis of existing material for these organizations will be required.

Not open to students in Curricula II and V.

631. Orchestration I. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 529. Mr. Whitcomb.

Scoring for string orchestra, salon orchestra, and full symphony orchestra, including an analysis of the scores of Mozart, Beethoven, Wagner, Berlioz, Rimsky-Korsakov, and Ravel. Attendance at a number of rehearsals and concerts of symphony orchestras will be required.

632. Orchestration II. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 631 or equivalent. Mr. Whitcomb.

Scoring for woodwind and brass instruments in various combinations and for wind band, including an analysis of the scores and arrangements of Stravinsky, Winterbottom, Godfrey, Leiden, Cailliet, and Gould. Attendance at a number of rehearsals and concerts of symphonic bands will be required.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, permission of the School. All instructors.

Investigation of minor problems in the field of music.

665. Advanced Harmonic Analysis. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 529 and 661.

Study of modern harmonic idioms and forms.

***667. Advanced Keyboard Harmony.** Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 528. Mr. Kob.

Chromatic harmony, modulation through common chord to remote keys; modulation through diminished-seventh and chromatic chords; common tone modulation; non-chordal tones, harmonizations at sight of melodies, invention of melodies over a given accompaniment, transposition, and improvisation.

668. Advanced Harmony. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 529. Mr. Kob.

Chromatic modulation. Creative work employing chromatic harmonies. Experimentation with modern harmonic idioms. Advanced analysis.

761. Modal Counterpoint. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Music 529. Miss Kuehefuhs.

A study of modal counterpoint based on the vocal polyphonic style of the Sixteenth Century. Analysis and writing of motets up to and including four-part writing.

762. Counterpoint. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 529. Mr. Kob.

Free counterpoint in two parts, leading to composition of two-part inventions in the style of Bach.

Not open to students who have credit for Music 662.

763. Counterpoint. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, Music 662 or 762. Mr. Kob.

Counterpoint in three parts, leading to the composition of three part inventions in the style of Bach. Analysis and experimentation with modern dissonant counterpoint.

Not open to students who have credit for Music 663.

850. Seminar in Music. One to five credit hours maximum allowed. All Quarters. Prerequisite, graduate standing and consent of adviser in respective field of specialization.

Extensive reading and research in the field of specialization. Weekly book reviews and outline. The work of this course is preparatory to a thesis.

950. Research in Music. All Quarters.

Original investigation in the field of specialization culminating in a theses for the Master of Arts degree in Music. Research is possible in the following fields: Instrumental Aspects of Music Education and Instrumental Conducting, Mr. Weigel; Vocal Aspects of Music Education and Evaluation, Mr. Leeder; Theoretical Aspects (Harmony) of Music Education, Mr. Kob; Voice, and Choral Literature, Mr. Diercks; Voice, and Voice Conducting, Mr. Gilliland; History and Literature of Music, and Psychology of Music, Mr. M. E. Wilson; Acoustics for Students of Music, Mr. Shaffer.

APPLIED MUSIC

Course of Study

The courses in Applied Music are organized to meet the needs of students for a variety of intensities of study; students whose major interests lie in public performance; those who are studying the instrument as a necessary adjunct to Theory, Music Education, Church Music, Radio Music.

Instruction is given in individual lessons (two one-half hour lessons per week) in order that the students of varied grades of advancement may be enrolled.

New students receive classification in the appropriate course and Quarter following tests held during the registration period preceding each Quarter.

Description of the several courses offered are to be found on the following pages.

Special Tuition Fee

A special laboratory fee in Applied Music is assessed in addition to the University Incident and the University Matriculation Fees.

The Applied Music laboratory fee is \$20.00 per Quarter for all students taking music courses:

Music 400 A, B, C, D, E, F

Music 508 A, B, C, D, E, F

Music 509 A, B, C, D, E, F

Music 510 A, B, C, D, E, F

Music 709 A, B, C, D, E, F

This fee covers all music course services such as special materials, recordings, practice rooms, listening rooms, use of University instruments, etc.

* Not given in 1947-1948.

400. Review of the Elements of Applied Music. A (Piano), B (Voice), C (Stringed Instruments), D (Woodwind Instruments), E (Brass Instruments), F (Organ). No credit. All Quarters. Enrollment in this course by permission only following entrance examinations. Two classes each week.

The fundamentals and technics of applied music. This course is designed for and open only to students who fail the entrance examinations or who do not maintain satisfactory standards of work in Music 508 A, B, C, D, E, F; 509 A, B, C, D, E, F; or 510 A, B, C, D, E, F.

508. Applied Music. A (Piano); B (Voice), C (*Strings); D (*Woodwinds); E (*Brasses); F (Organ). Two credit hours. All Quarters. Two recitations each week (two students to a class), and a minimum of two hours of daily practice. Prerequisite, passing of entrance examinations. Required of students in Music Curriculum IV (Arts and Sciences Music Majors) to a minimum of twelve Quarter hours. Not open to students in Curricula I, II, III, V.

(A) Piano: Miss Hardy, Miss Anawalt, Mr. Frederic, Miss Jones, Mr. Lora, Mr. Owen.

(B) Voice: Mr. Gilliland, Mr. Diercks, Mr. Fountain, Mr. Staiger, Miss Turner, Miss Van Loon.

(C) Strings: Mr. Hardesty, Mr. Mancinelli, Mr. Near, Mr. Neumann.

(D) Woodwinds: Mr. McGinnis, Miss Curtin, Mrs. King.

(E) Brasses: Mr. Whitcomb, Mr. Brightwell, Mr. Wakser.

(F) Organ: Mr. Held.

This course includes musical and technical training in Applied Music on instruments offered. The requirements for each division to be determined by the instructor in that division.

* Strings: Violin, Viola, Violoncello, Contrabass.

Woodwinds: Flute, Clarinet, Oboe, Saxophone, Bassoon.

Brasses: Trumpet, Cornet, French Horn, Trombone, Baritone Horn, Bass Horn.

509. Applied Music. A (Piano); B (Voice); C (*Strings); D (*Woodwinds); E (*Brasses); F (Organ). Three credit hours. All Quarters. Two recitations each week, and a minimum of three hours of daily practice. Required of all students in Curriculum V to a minimum of thirty-six Quarter hours. Prerequisite, passing of entrance examinations or Music 400A, B, C, D, E, or F, followed by a re-examination. (Two students to a class).

(A) Piano: Miss Hardy, Miss Anawalt, Mr. Frederic, Miss Jones, Mr. Lora, Mr. Owen.

(B) Voice: Mr. Gilliland, Mr. Diercks, Mr. Fountain, Mr. Staiger, Miss Turner, Miss Van Loon.

(C) Strings: Mr. Hardesty, Mr. Mancinelli, Mr. Near, Mr. Neumann.

(D) Woodwinds: Mr. McGinnis, Miss Curtin, Mrs. King.

(E) Brasses: Mr. Whitcomb, Mr. Brightwell, Mr. Wakser.

(F) Organ: Mr. Held.

The choice of a major instrument is made by music students electing Curriculum V at the time of application for admission to the School of Music. Approval of choice is given by the Music Entrance Examination Board following examination. (See Page 69).

The requirements for each division to be determined by the instructor of that division. Copies of these requirements may be secured at the School of Music Office.

* Strings: Violin, Viola, Violoncello, Contrabass..

Woodwinds: Flute, Clarinet, Oboe, Bassoon.

Brasses: Trumpet, French Horn, Trombone, Bass Horn.

510. Applied Music. A (Piano); B (Voice); C (*Strings); D (*Woodwinds); E (*Brasses); F (Organ). Two credit hours. Autumn, Winter, Spring Quarters. Two recitations each week (two students to a class), and a minimum of two hours of daily practice. Required of all music students as follows: Curricula I, II, III, to a minimum of eighteen Quarter hours; Curriculum IV to a minimum of twelve Quarter hours. Prerequisite, passing of entrance examinations or Music 400A, B, C, D, E, or F followed by re-examination.

(A) Piano: Miss Hardy, Miss Anawalt, Mr. Frederic, Miss Jones, Mr. Lora, Mr. Owen.

(B) Voice: Mr. Gilliland, Mr. Diercks, Mr. Fountain, Mr. Staiger, Miss Turner, Miss Van Loon.

(C) Strings: Mr. Hardesty, Mr. Mancinelli, Mr. Near, Mr. Neumann.

(D) Woodwinds: Mr. McGinnis, Miss Curtin, Mrs. King.

(E) Brasses: Mr. Whitcomb, Mr. Brightwell, Mr. Wakser.

(F) Organ: Mr. Held.

* Strings: Violin, Viola, Violoncello, Contrabass..

Woodwinds: Flute, Clarinet, Oboe, Bassoon.

Brasses: Trumpet, French Horn, Trombone, Bass Horn.

The requirements for each division to be determined by the instructor of that division. Copies of these requirements may be secured at the School of Music Office.

The choice of a major subject in Applied Music is made by all music majors (Curricula I, II, III, IV,) at the time of application for admission to the School of Music. Approval of choice is given by the Music Entrance Examination Board following examination. (See page 69).

709. Applied Music. A (Piano); B (Voice); C (*Strings); D (Woodwinds); E (*Brasses); F (Organ). Three credit hours. All Quarters. Prerequisite, Graduate standing in Music. Required of all students with a Graduate Major in performance. Two recitations each week (two students to a class), and a minimum of 3 hours of daily practice.

The study of Applied Music at Graduate level. The requirements for each division is to be determined by the instructor in that division.

* Strings: Violin, Viola, Violoncello, Contrabass.

Woodwinds: Flute, Clarinet, Oboe, Bassoon.

Brasses: Trumpet, French Horn, Trombone, Bass Horn.

HISTORY AND LITERATURE OF MUSIC

405. An introduction to the Appreciation of Music. Three credit hours. One Quarter. Autumn, Winter, Spring. Three lectures each week. Required of all music majors and minors. Mr. M. E. Wilson.

Study of the factors involved in intelligent listening with special reference to musical form. A brief survey of the history of the art.

429. The Appreciation of Music. Three credit hours. One Quarter. Autumn and Spring. Three lectures each week. Miss Dierker.

For the music listener with little or no formal training in music. Lectures and illustrations in explanation of the principal elements involved in active, intelligent listening. Music illustrations selected primarily from standard concert repertoire.

Not open for credit to students specializing in music.

506. History and Appreciation. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Music 405. Required of all music majors and minors. Mrs. Mooney.

A study of the development of music from earliest times through the polyphonic and classical periods with especial emphasis on the historical, social, and cultural backgrounds of each period. Lectures will be supplemented by assigned readings, musical illustrations, scores, and phonograph recordings.

507. History and Appreciation. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Music 405. Required of all music majors and minors. Mrs. Mooney.

A continuation of Music 506. The music of the Romantic and Modern Schools will be studied. Lectures will be supplemented by assigned readings, musical illustrations, scores, and phonograph recordings.

601. The Romanticists. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, fifteen hours of theoretical music or equivalent and a course in history and appreciation. Mr. M. E. Wilson.

The music of the romantic period in Germany and France.

***602. The Opera of the Nineteenth Century.** Three credit hours. Three lectures each week. Prerequisite, fifteen hours of theoretical music or equivalent and a course in history and appreciation. Mr. M. E. Wilson.

A short review of the history of opera; a study of the complete more important operas of the Nineteenth Century with the chief emphasis on the Wagnerian music drama; and a consideration of the problems involved in a hybrid art.

603. Modern Music. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, fifteen hours of theoretical music or equivalent and a course in history and appreciation. Mr. M. E. Wilson.

A brief survey of modern developments with special reference to the composers of France and Russia.

* Not given in 1947-1948.

604. Organ Literature. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, fifteen hours of theoretical music or equivalent and a course in history and appreciation. Mr. Held.

A comprehensive survey from the earliest compositions to the works of present-day composers.

605. Choral Literature. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, fifteen hours of theoretical music or equivalent and a course in history and appreciation. Mr. M. E. Wilson.

Choral composers and literature with special consideration of the Sixteenth and Seventeenth Centuries.

***606. The Literature of Chamber Music.** Three credit hours. Three lectures each week. Prerequisite, fifteen hours of theoretical music or equivalent and a course in history and appreciation. Mr. M. E. Wilson.

A survey of the chamber music of the classical and romantic periods with performance, analysis, and discussion.

†607. The Classic Period. Three credit hours. Three lectures each week. Prerequisite, fifteen hours of theoretical music or equivalent and a course in history and appreciation. Mr. M. E. Wilson.

A study of organ and other keyboard compositions and of chamber music and early orchestra writing in Germany, Italy, France, and England in the period 1650 to 1725.

608. Music Literature of Latin America. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, fifteen hours of theoretical music or equivalent and a course in history and appreciation. Miss Dierker.

This course is a survey of the origins, influences, and the development of music of the Western Hemisphere. Lectures and assigned readings, supplemented by musical illustrations and phonograph records.

609. Mediaeval Modes. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, Junior standing in Music, or permission of the instructor. Miss Kuehefuhs.

A study of the historical background and characteristics of Plainsong, including the technical aspects of notation, modes, rhythm and chironomy.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, permission of the School. All instructors.

Investigation of minor problems in the field of music.

850. Seminar in Music. One to five credit hours maximum allowed. All Quarters. Prerequisite, graduate standing and consent of adviser in respective field of specialization.

Extensive reading and research in the field of specialization. Weekly book reviews and outline. The work of this course may be preparatory to a thesis.

950. Research in Music. All Quarters.

Original investigation in the field of specialization, for the Master of Arts degree in Music. Graduate study is possible in the following fields: Instrumental Aspects of Music Education and Instrumental Conducting, Mr. Weigel; Vocal Aspects for Music Education and Evaluation, Mr. Leeder; Theory of Music, Mr. Kob; Choral and Church Music, Mr. Diercks; Voice, and Vocal Conducting, Mr. Gilliland; History and Literature of Music, and Psychology of Music, Mr. M. E. Wilson; Accoustic for Students of Music, Mr. Shaffer.

MUSIC EDUCATION

511. Applied Music Methods and Materials. A (Piano); B (Voice); C (Stringed Instruments); D (Woodwind Instruments); E (Brass Instruments). Two credit hours. Autumn, Winter, and Spring Quarters. Required of all music students, as follows: Curriculum I, to a maximum of twelve Quarter hours; Curriculum II, to a maximum of six Quarter hours; Curriculum III, to a maximum of eighteen Quarter hours. Prerequisite, passing of entrance examination or Music 400A, B, C, D, E, or F. *Piano*: Miss Anawalt, Miss Hardy,

* Not given in 1947-1948.

† Not given during academic year, 1947-1948.

Miss Jones, Mr. Lora, Mr. Owen, Mr. Frederick; *Voice*: Mr. Diercks, Mr. Gililand, Mr. Fountain, Mr. Staiger, Miss Turner, Miss Van Loon; *Stringed Instruments*: Mr. Hardesty; *Woodwind Instruments*: Mr. McGinnis; *Brass Instruments*: Mr. Whitcomb; *Organ*: Mr. Held.

The choice of the minor instrument sequence in applied music must be made from an area other than the major instrument sequence. For students in Curricula II and III, the requirements include playing in a training orchestra and band on the major instrument chosen.

This is an exploratory course and is designed to give facility in performance of each instrument listed, together with the study of the methods of these instruments.

512. Applied Music Methods and Materials. C (Stringed Instruments); D (Woodwind Instruments); E (Brass Instruments). Two credit hours. Autumn, Winter and Spring Quarters. Required of all music students, as follows: Curricula II and III to a maximum of six Quarter hours. Prerequisite, passing of entrance examination or Music 400 A, B, C, D, E, or F. *Stringed Instruments*: Mr. Hardesty; *Woodwind Instruments*: Mr. McGinnis; *Brass Instruments*: Mr. Whitcomb.

The choice of the minor subject in applied music must be made from an area other than the major and other minor sequence.

For students in Curriculum II, the requirements would include playing in a training orchestra or band on the second minor instrument chosen.

This is an exploratory course and is designed to give facility in performance of each instrument listed, together with the study of the methods of these instruments.

513. Applied Music Methods and Materials. Two credit hours. Spring Quarter. Four class lessons each week. Required of all music students in Curricula II and III. Mr. McBride.

Methods and class performance on the instruments of the percussion family. A study of materials and their presentation for the elementary and secondary school.

514. Improvisation and Sight Reading at the Keyboard. Two credit hours. Winter Quarter. Two class lessons each week. Prerequisite, elementary knowledge of piano and harmony. Miss Hardy.

The chief purpose of this course will be to give students a facility adequate for playing simple accompaniments at the keyboard. Simple cadence patterns, both in chords and arpeggios, in all keys, progressing to more complicated patterns as proficiency is developed. The course will gradually lead into improvisation and the ability to work out tunes by ear. Sight reading based on a quick recognition of basic chords will be included.

Not open to piano majors or minors.

540. Vocal Conducting. Three credit hours. One Quarter. Autumn and Winter. Three periods each week. Prerequisite, Music 402. Mr. McBride.

The basic technique of the baton with special reference to conducting choral organizations. Music suitable for junior and senior high school will be studied. A syllabus of selected literature and reading assignments will be used as a basis of study.

Not open to students who have credit for Music 440.

543. Instrumental Conducting. Three credit hours. Spring Quarter. Three recitations each week. Prerequisite, junior standing in music. Mr. McBride.

The basic technique of the baton with special reference to conducting instrumental organizations. Music suitable for junior and senior high school will be studied. A syllabus of selected literature and reading assignments will be used as a basis of study.

Not open to students who have credit for Music 642.

546. Survey and Appreciation of Music Literature. Two credit hours. One Quarter. Autumn and Winter. Four recitations each week. Required of and open only to students in the Curriculum in Elementary Education, second year. No prerequisite. Miss Slawson, Miss Dierker.

Lectures, illustrations, and analyses of elements involved in active intelligent listening, understanding, and appreciation of representative works of the great masters of music.

Not open to students who have credit for Music 446.

547. Fundamentals of Music. Three credit hours. One Quarter. Winter and Spring. Five recitations each week. Required of and open only to students

in the Curriculum in Elementary Education. Prerequisite, Music 446 or 546. Miss Slawson, Miss Dierker.

Ear-training, music reading, creative writing, voice production, and other fundamentals involved in the actual participation in music are introduced in this course. School song materials are used for this work.

Not open to students who have credit for Music 447.

548. Music Education. Three credit hours. One Quarter. Autumn and Spring. Five recitations each week. Required of and open only to students in the Curriculum in Elementary Education. Prerequisite, Music 446 and 447 or 546 and 547. Miss Slawson, Mr. McBride.

Music materials and literature for children, including singing, rhythmic, creative, and listening experience, and their presentation.

Not open to students who have credit for Music 448.

622. Music Education in the Elementary School. Five credit hours. One Quarter. Autumn and Winter. Five recitations each week. Music Curricula I and III, third year. Prerequisite, junior standing in music. Mr. Leeder, Mr. McBride.

Designed for teachers and supervisors of Vocal Music in the Elementary Schools. Special consideration will be given the study of methods and instruction, organization of material, and teaching procedures. Observation in the Elementary Schools.

Not open to students who have credit for Music 523.

623. Music Literature for the Elementary School. Five credit hours. Winter Quarter. Five recitations each week. Music Curricula I and III, third year. Prerequisite or concurrent, Music 523. Miss Dierker.

Designed to familiarize the student with song and listening materials suitable for use in the elementary school. Study of material supplementary to that used in Music 523.

624. Music Education in the Secondary Schools. Five credit hours. One Quarter. Autumn and Spring. Five recitations each week. Music Curricula I and III, third year. Prerequisite, Music 523. Mr. Leeder.

Music literature for use in the secondary schools and how to present it. A course for special teachers and supervisors of music.

640. Instrumental Music Education I. Three credit hours. Autumn Quarter. Three recitations each week. Required of all music students in Curricula II and III. Prerequisite, junior standing in music. Mr. McBride.

This course provides an opportunity for a critical evaluation of current principles and procedures in the teaching of instrumental music in the elementary schools. Special consideration will be given to instrumental music in the elementary school and will include the study of methods of instructions, organization of materials, teaching procedures and preparatory instruments. Observation in the elementary schools.

641. Instrumental Music Education II. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, junior standing in music. Mr. Weigel.

Organization and administration of instrumental music as it functions in the secondary school. Special consideration will be given to the school orchestra, concert band, marching band, small ensembles, solo performance, instrumentation, seating plans, materials, equipment, housing rehearsal procedures, teaching problems, teacher supervision and teacher training program, repertoire, and public performance. Observation in the secondary schools.

643. Advanced Instrumental Conducting. Three credit hours. Autumn Quarter. Three lectures and drill periods each week. Prerequisite, Music 542 or equivalent. Mr. Weigel.

This course aims to develop the power to interpret the larger forms of instrumental literature and to read from full score; it includes problems of tempo, phrasing, nuance, balance, dynamics, and timbre.

Open only to students demonstrating advanced capacities in musicianship and technical skills in conducting.

646. Advanced Vocal Conducting. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, Music 440 or 540. Mr. Gilliland.

This course aims to develop the power to interpret the larger forms of choral literature and to read from full score; it includes problems of tempo, phrasing, nuance, balance, dynamics, and timbre.

Open only to students demonstrating advanced capacities in musicianship and technical skills in conducting.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, permission of the School. All instructors.

Investigation of minor problems in the field of music.

656. Principles of Music Learning. Three credit hours. Autumn Quarter. Three recitations each week. Mr. M. E. Wilson.

An analysis of the factors in learning to appreciate and perform music in early childhood and through adult life.

666. Teaching of Theory in Secondary Schools. Three credit hours. Autumn Quarter. Three recitations each week. Prerequisite, senior standing in Music. Mr. Kob.

Basic principles and problems in the teaching of music theory. The presentation of a correlated course in sight singing, dictation, and harmony in secondary schools.

712. Supervision of Music in the Elementary Schools. Three credit hours. Spring Quarter. Three recitations each week. Open to seniors and to graduate students majoring in music. Mr. Leeder.

A study of the specific problems of music supervision with special attention given to curriculum construction.

Not open to students who have credit for Music 612.

†713. Supervision of Music in Secondary Schools. Three credit hours. Three recitations each week. Open to seniors and to graduate students majoring in music. Mr. Leeder.

This course is designed to study evaluation criteria and the problems of the music supervisor in the secondary and junior high school.

Not open to students who have credit for Music 613.

***715. Principles of Group Instruction in Piano.** Three credit hours. Prerequisite, permission of the School.

Examination and evaluation of current methods of instruction and materials. This course is designed to provide observation and practice of class instruction in piano for teachers of experience.

Not open to students who have credit for Music 444 or 615.

716. Principles of Group Instruction in Voice. Three credit hours. Spring Quarter. Five recitations each week. Prerequisite, advanced student of singing or permission of the instructor. Mr. Gilliland.

Basic principles and problems in group voice instruction with emphasis on the participation approach.

717. Song Literature. Three credit hours. Three periods each week. Spring Quarter. Prerequisite, eighteen hours of voice or the equivalent. Mr. Gilliland and others.

The study of song literature selected to meet the needs of the student, artist, or teacher; functions of the types of songs; program building.

747. Problems in Music Education. One to five credit hours. All Quarters. Open by permission of the instructor, to supervisors and teachers of music who have senior standing in the music curriculum. Mr. Leeder.

Study of problems encountered in the teaching and supervising of music. Additional investigation of the course of study, special programs, the integrated course, etc.

This course may be repeated to a maximum of ten hours' credit.

Not open to students who have credit for Music 647.

† Not given during the academic year, 1947-1948.

* Not given in 1947-1948.

748. Choral Problems. One to five credit hours. All Quarters. Lectures, observations, and special problems. Prerequisite, permission of the instructor. Mr. Diercks.

Study of the technique of handling choruses of high school age and above, including the study of tone interpretation and literature. A full chorus will be available for daily observation and demonstrations.

Special emphasis will be placed upon the clinical aspects of the chorus performance and rehearsals.

This course may be repeated to a maximum of ten hours' credit.

Not open to students who have credit for Music 648.

749. Instrumental Problems. One to five credit hours. Spring and Summer. Lectures, observations and special problems. Prerequisite, permission of the instructor. Mr. Weigel.

Study of problems encountered in teaching, supervision and organization of instrumental music program. A full orchestra or band will be available for observation and demonstrations.

Special emphasis will be placed upon the clinical aspects of the performances and rehearsals.

This course may be repeated to a maximum of ten hours' credit.

Not open to students who have credit for Music 644.

850. Seminar in Music. One to five credit hours maximum allowed. All Quarters. Prerequisite, graduate standing and consent of adviser in respective field of specialization.

Extensive reading and research in the field of specialization. Weekly book reviews and outline. The work of this course may be preparatory to a thesis.

950. Research in Music. All Quarters.

Research and study in the field of specialization for the Master of Arts degree in Music. Graduate study is possible in the following fields: Instrumental Aspects of Music Education and Instrumental Conducting, Mr. Weigel; Vocal Aspects of Music Education and Evaluation, Mr. Leeder; Theory of Music, Mr. Kob; Choral and Church Music, Mr. Diercks; Voice and Vocal Conducting, Mr. Gilliland; History and Literature of Music and Psychology of Music, Mr. M. E. Wilson; Acoustics for Students of Music, Mr. Shaffer.

CHURCH MUSIC

576. Field Experience in Church Music. Two credit hours. Autumn, Winter, Spring. Prerequisite, Music 646 and 671. Mr. Diercks.

Supervised experience in the actual church situation.

This course may be repeated three Quarters.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, the permission of the School. All instructors.

Investigation of minor problems in the field of music.

670. Worship. Two credit hours. Autumn Quarter. Two recitations each week. Prerequisite, Music 605 and at least eighteen hours of Music 509B or 509F, or the equivalent. Mr. Diercks.

A consideration of the form and symbols of the service of worship. A course designed to aid the student to an understanding of the traditional and modern trends in all forms of worship with especial emphasis on the ties between music, other arts, and the litany of a service.

Not open to students who have credit for Music 573.

671. Technics and Materials for Church Choirs. Three credit hours. Winter Quarter. Three recitations each week. Prerequisite, at least forty-five Quarter hours of music courses. Mr. Diercks.

A study of methods and materials for church choirs, including the Boychoir. The study of practical problems of mounting a church service, chanting, processional, etc., with consideration for anthem selection and performance, with observation of choirs.

Not open to students who have credit for Music 772.

672. Hymnology. Two credit hours. Spring Quarter. Two recitations each week. Mr. Diercks.

A study of the history and development of hymns with a consideration of the hymns of all faiths and their function in service.

Not open to students who have credit for Music 574.

†772. **The Church Choir.** Three credit hours. Five recitations each week. Prerequisite, at least forty-five hours of music or equivalent. Mr. Diercks.

A study of the functioning of the church choir as an educational and religious organism, with emphasis on problems of development and direction and upon music as worship and its place in the church program.

Not open to students who have credit for Music 671.

RADIO MUSIC

Arts Survey 405. Introduction to Radio. Two credit hours. One Quarter. Winter and Spring. Two class meetings and one laboratory period each week. Required of undergraduate students as prerequisite for all radio courses in Speech, Music, Education, Journalism, or for Electrical Engineering 655. All Radio Instructors.

An introduction to the whole field of non-engineering radio history, structure, regulation, and support of broadcasting; organization and function of the individual station; fields of specialization, their potentialities and limitations; public responsibilities of radio as mass communication; the radio listener. Lectures, discussion, observation, and individual problems.

555. Music in Radio Broadcasting. Three credit hours. Autumn, Winter, and Spring. Five meetings each week. Open to students specializing in music or others by permission of the instructor.

Consideration of the special problems involved in adapting the principles of music program building and performance to the radio. A practicum in music script writing, selection of materials, preparation of materials, performance and evaluation.

Section (A) *Music Time.* Autumn, Winter, Spring. WOSU radio program for Elementary Grades 1-3. Monday, 1:30-1:45 p. m. Miss Thomas.

Section (B) *Time for Music.* Autumn, Winter, Spring. WOSU radio program for Intermediate Grades 4-6. Wednesday, 2:30-2:45 p. m. Miss Slawson.

Section (C) *Music Commentation.* Winter Quarter. WOSU radio program. Preparation and presentation of commentary material upon musical events. Mr. M. E. Wilson.

Section (D) *A Survey of Piano Literature.* Spring Quarter. WOSU radio program. Broadcast of significant works from the piano classics, by the faculty and students of the Piano Department. Miss Hardy.

Section (E) *Song Literature.* Winter Quarter. WOSU radio program. An overview of song material, presented by the faculty and students of the Vocal Department. Mr. Staiger.

Not open to students who have credit for Music 655.

Students are limited to a total of nine credit hours for Music 555, 651, and 652.

650. Minor Problems. One to five credit hours. All Quarters. Prerequisite, the consent of the department. All instructors.

Investigation of minor problems in the field of music.

651. Radio Music Programming. Three credit hours. Winter Quarter. Three recitations and one laboratory period each week. Prerequisite, at least forty-five Quarter hours of music courses which must include a radio survey course, and permission of the instructor.

The analysis and study of music with special reference to mood aspects as they relate to radio music programming.

Students are limited to a total of nine credit hours for Music 555, 651, and 652.

652. Radio Music Production. Three credit hours. Spring Quarter. Three recitations and one laboratory period each week. Prerequisite, at least forty-

† Not given during the academic year, 1946-1947.

five Quarter hours of music courses which must include a radio survey course, and permission of the instructor.

Study of the problems in adapting music and its presentation to the radio for commercial and educational purposes. Practice afforded in organizing and mounting music programs.

Students are limited to a total of nine credit hours for Music 555, 651, and 652.

CAMPUS MUSIC GROUPS

Participation in University music activities is open to all students in the University. Students not specializing in music may enroll and receive credit toward any undergraduate degree for a total of six Quarter hours in Music A, B, and D.

To enroll in music organizations students should observe the following:

Tryouts for University Symphony Orchestra and University Symphonic Band

Candidates will report for examination to Mr. Weigel (Music B), and to Mr. Whitcomb (Music D) for proficiency tests and placement. (See Orientation Week Bulletin for schedule of tryouts.)

Tryouts for Choruses and Glee Clubs

Candidates will report for proficiency test and placement to Mr. Diercks (Music A and Music F), Mr. Gilliland (Music G) and Mr. Fountain (Music E). See Orientation Week Bulletin for schedule of tryouts.

Tryouts for University Marching Band and Regimental Bands

Candidates will report for examination to Mr. Whitcomb for tests and placement. (See Orientation Week Bulletin for schedule of tryouts.)

NOTE: (a) Freshmen and Schopmores who are assigned to Regimental Bands should schedule Regimental Bands as Military Science 421, 422, 423 in the three Quarters of the freshman year and as Military Science 424, 425, 426, in the three Quarters of the sophomore year.

(b) Candidates assigned to *Regimental Bands* will schedule Military Science 421-426 (Band), Monday, Wednesday, and Friday at four o'clock.

(c) Candidates assigned to the *Marching Band* will schedule Military Science 421-426 (Band) or Music C for Monday, Tuesday, Wednesday, Thursday, and Friday from four to six o'clock.

(d) Only Juniors and Seniors may schedule Music C. This course represents volunteer military service and may only be taken for credit to a total of six Quarter hours after six Quarter hours have been earned in military science.

Students Majoring in Music

All students specializing in music are required to enroll in Music A, B, C, D, E, F, G, H, or I as follows:

1. (a) Curriculum I: A total of nine Quarter hours in Music A, E, F (1 or 2) or G of which not less than six hours shall be in Music A. An additional credit not to exceed six hours may be obtained in Music F (1 or 2).

(b) Curriculum II: A total of nine Quarter hours in Music B, C, or D of which not less than six hours shall be in B or D. An additional credit not to exceed three hours may be obtained in Music F (3 to 7).

(c) Curriculum III: A total of fifteen Quarter hours in Music A, B, C, and/or D of which not less than six hours each shall be in A, B, or D. An additional credit not to exceed six hours may be obtained in Music F (1 to 7).

(d) Curriculum V: A total of not less than nine Quarter hours in Music A, B, or D.

2. (a) Students majoring in instrumental music and who play *stringed* instruments, will schedule Music B for Tuesday, Wednesday, Thursday, and Friday at two o'clock.

(b) Students majoring in instrumental music and who play *brass* instruments, will schedule Music B for Monday, Tuesday, Wednesday, and Friday at two o'clock, and/or Music D Monday, Tuesday, Wednesday, and Friday at three o'clock.

(c) Students majoring in instrumental music and who play *woodwind* instruments will schedule Music B for Monday, Tuesday, Wednesday, and Friday at two o'clock, and/or Music D for Monday, Wednesday, Thursday, and Friday at three o'clock.

(d) All students who are majoring in vocal music will schedule Music A, Monday, Wednesday, and Friday at one o'clock.

Music A. University Chorus. One credit hours. Autumn, Winter, and Spring Quarters. Three rehearsals each week. Mr. Diercks.

Open to students in any department of the University. Acceptance for the course is subject

to the written approval of the director after individual conference. Advanced students and those with special interests and talents through the rehearsals of smaller groups will be given opportunity to study the madrigal and other choral literature suitable to small ensembles.

Music B. University Orchestra. One credit hour. Autumn, Winter, and Spring Quarters. One sectional rehearsal and three full rehearsals each week. Mr. Hardesty.

Open to any student in the University by permission of the director. Open also in the Summer Quarter to qualified high school players. This group of combined University and high school performers will be known as the Central Ohio Orchestra and will serve as a laboratory for advanced instrumental conducting and high school materials.

Music C. The University Marching Band. One credit hour. Autumn, Winter, and Spring Quarters. Three or more rehearsal and drill periods each week. Open only to Juniors and Seniors who have earned six hours credit in Military Science (Band). Membership by permission of the director. Mr. Whitcomb, Mr. McGinnis.

The University Band operates as two or more military units. A combination of these units, or selected men from each, serves as a massed band for athletic events and military reviews.

Music D. The University Symphonic Band. One credit hour. Autumn, Winter, and Spring Quarters. One sectional rehearsal and three full rehearsals each week. Prerequisite, consent of the director. Mr. Whitcomb.

The University Band is a selected group of limited membership devoted to the preparation and performance of the best band literature. The group gives public concerts and supplies music for University functions. Membership is open to students of any year or department but is limited to performers of superior ability.

Music E. Women's Glee Club. No credit. Autumn, Winter, and Spring Quarters. Mr. Fountain.

Membership in this group is open to all women students in the University. Examinations are held at stated periods and vacancies in the club filled with the best available voices. The majority of elections take place in the Autumn Quarter.

Music F (1 to 7). University Music Ensembles. (1) Symphonic Choir, Mr. Diercks; (2) University Singers, Mr. Diercks; (3) Radio Ensembles, Mr. Hardesty; (4) String Ensembles, Mr. Hardesty; (5) Woodwind Ensembles, Mr. McGinnis; (6) Brass Ensembles, Mr. Whitcomb; (7) Miscellaneous Ensembles. One credit hour. Autumn, Winter, and Spring Quarters. Rehearsals at the discretion of the instructor. Prerequisite, consent of the respective instructor.

Designed for the cultural and technical advancement of student members and for the performance of chamber music. These groups give public concerts and supply music for University programs.

Enrollment open to students of any year.

The course may be repeated, but credit beyond the curriculum requirements will be limited to six hours only. If a student participates in more than one ensemble he is limited to two hours credit for each Quarter of enrollment.

Music G. Men's Glee Club. No credit. Autumn, Winter, and Spring Quarters. Mr. Gilliland.

Membership in this group is open to all men students in the University. Examinations are held at stated periods and vacancies in the club filled with the best available voices. The majority of elections take place in the Autumn Quarter.

Music H. Training Orchestra. One credit hour. Spring Quarter. Two rehearsals each week. Mr. McBride.

A materials laboratory and performance experience group for students in the teacher training program, and for others in the University who desire experience in orchestral performance but who cannot qualify for Music B (University Orchestra). Required of music majors on their minor instrument in Curricula II and III, and instrumental minor in Curriculum I. See Mr. McBride for permission to enroll.

Music I. Training Band. One credit hour. Winter Quarter. Two rehearsals each week. Mr. McBride.

A materials laboratory and performance experience group for students in the teacher training program, and for others in the University who desire experience in band performance but who cannot qualify for Music D (University Band). Required of music majors on their minor instrument in Curricula II and III, and instrumental minors in Curriculum I. See Mr. McBride for permission to enroll.

Music J. Recreational Music. One credit hour. One Quarter. Autumn and Spring. One two-hour class period each week. Prerequisite, ability to read and sing a simple folk song. Mr. Graham.

This course is designed for recreation leaders, camp leaders, social workers, and teachers of music. A presentation of suitable music literature for recreational programs, experience in creating simple instruments requiring little skill for playing, experience in group leadership.

CONCERTS AND RECITALS

550. University Concerts. Guest Artist Series. (Eight Concerts). No credit. *Open to all students in the University.* Required of students enrolled in Music 509 A, B, C, D, E, F and 510 A, B, C, D, E, F or 709 A, B, C, D, E, F. Eight concerts or recitals presented by distinguished artists and musical groups. These concerts will include all types of instrumental and vocal music and will offer an opportunity to hear musical literature drawn from the accepted masters of the past; and from contemporaries, American and European. Artist and dates will be announced in a special bulletin, available at the School of Music, Room 1, Page Hall or at Information Desk, Administration Building.

Any student registered in any college of the University may take advantage of this great cultural opportunity by following this procedure.

1. Go to the Music Office, Room 1, Page Hall, and request that Music 550 be added to the Autumn Quarter schedule.
2. Pay the fee of four dollars at the same time and place and obtain season ticket and seat reservation.
3. Present the appropriate ticket at the Chapel door for admission to each concert.

Note: (a) Reservations for students will close October 8th.

(b) Tickets will be made available to student wives, or husbands, in cases where either is registered for the series, the University Faculty and the University Business and Operations Staffs. Any student desiring a ticket for wife, or husband will make the request when he applies at the Music Office, together with evidence of his marriage.

(c) Tickets for all others than students enrolled in the University will be at the rate of *four dollars plus tax*.

For course in the Preparation of Theses, see the Department of Education, course 802.

For course in the Psychology of Music, see the Department of Psychology, course 667.

For course in the Acoustics for Students of Music, see the Department of Physics, course 645.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "900" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

NAVAL SCIENCE

Office, The Armory

CAPTAIN SHAW, COMMANDER LANGEN, LIEUTENANT COMMANDERS ADAMS, HARDMAN, AND WALSH, LIEUTENANT CHESTER, AND CAPTAIN MATTHEWS (USMC)

The postwar Naval ROTC was established by Public Law 729 and provides for the selection and training of officer candidates for the Navy and Marine Corps by means of Naval Scholarships in colleges and universities throughout the country. The purpose of the NROTC is to provide a steady supply of well-educated junior officers for the Line and Staff Corps of the Regular Navy and Marine Corps, and to build up a reserve of trained officers who will be ready to serve their country at a moment's notice in a national emergency. NROTC graduates will be given equal

rank, equal treatment, and equal opportunities with the graduates of the United States Naval Academy.

Candidates for enrollment in the NROTC as Midshipmen USNR, are given an examination, conducted annually throughout the nation. The exact date is set each year by the Navy Department. Those men who pass the written examination are then given physical examinations and are interviewed at the Office of Naval Officer Procurement nearest their respective homes, and finally are selected by State Selection Committees appointed in each state. The quota of NROTC students under the above plan allotted to each state is in accordance with the state male high school enrollment. The quota for the State of Ohio this year is one hundred forty-three students.

The general eligibility requirements for enrollment are:

- (a) Be a male citizen of the United States.
- (b) At the time of enrollment, if a minor, have the consent of parent or guardian.
- (c) Agree to accept a commission in the Navy or Marine Corps.
- (d) Agree to remain unmarried while in the college program.
- (e) Be physically qualified.

A candidate must be, not less than seventeen nor more than twenty-one years of age on July 1 preceding the beginning of the Quarter in which he enrolls. He must be eligible for enrollment in The Ohio State University. Persons already in residence at the University are eligible if they agree to continue an academic course at the undergraduate and/or graduate level for four years after enrollment.

The cost of tuition, fees, and textbooks will be paid by the government. Necessary uniforms will be provided by the government, and students will receive retainer pay for other expenses during college at the rate of \$600.00 per year. Normally students will attend college for four years. While in college they may take any course leading to a baccalaureate or higher degree, but must include therein thirty-six Quarters of Naval Science, plus certain minimum requirements in mathematics, physics, and English. They will wear the uniform only when engaged in drills or other Naval Activities prescribed by the Professor of Naval Science, and will be subject to naval discipline only at those times. They will be required to make two summer cruises and take one summer period of aviation indoctrination lasting from six to eight weeks each, and upon graduation must accept a commission as Ensign, USN, or Second Lieutenant, USMC. After from fifteen months to two years of active duty, they will be given the option to serve an additional year and to apply for a permanent commission in the Regular Navy or Marine Corps, or, if they do not choose a career in the Regular Navy or Marine Corps, they will be placed on inactive duty in the Naval Reserve or Marine Corps Reserve. Reserve officers are not called to active duty except during war or a national emergency.

In addition to officer candidates described above, a limited number of freshmen may enroll in the NROTC as Contract Students. The Contract Student enters into a mutual contract with the Navy which provides that he take the same Naval Science, Mathematics, and Physics courses required of the Regular NROTC, that he take one summer cruise of approximately three weeks duration between his junior and senior year, and that he accept a commission in the Naval Reserve or Marine Corps Reserve upon graduation. There is no active duty except during war or a national emergency.

The Contract Student receives retainer pay during his junior and senior years amounting to \$0.65 per day, and his uniforms and Naval Science textbooks are furnished by the Navy.

The yearly quota of incoming students in the NROTC unit is limited by Congressional appropriations, and new students are enrolled only at the beginning of the Autumn Quarter. The quota to be enrolled under the scholarship plan outlined above in the Autumn Quarter of 1947 is fifty-two students. The number of Contract Students (non-scholarship) that may be enrolled has not yet been announced by the Navy Department.

Students who are ineligible for enrollment in the NROTC solely because they are in excess of the allowed quota of the unit, may be permitted to pursue Naval Science courses for college credits. They are not eligible to make NROTC practice cruises nor to be paid any compensation or benefits.

The College of Engineering grants twelve credit hours for eighteen Quarters of work taken during the first and second year. Full credit is given in the College of Engineering for Advanced Naval Science courses taken during the third and fourth years.

401. Naval Orientation and Administration. Three credit hours. Autumn Quarter. Three recitations and one two-hour laboratory period each week.

Broad picture of the Navy and naval terminology as evidenced by a study of traditions, customs, regulations, terminology, organization, discipline, and justice. Expanded in the latter half to emphasize fleet and ship organization, correspondence forms, and naval law.

402. Basic Seamanship and Communications. Three credit hours. Winter Quarter. Three recitations and one two-hour laboratory period each week.

Those matters with which the Officer of the Deck is immediately concerned: Small boat handling, use and construction of deck machinery, emergency drills, weather, the rules of the road at sea, and the role of communications in the exercise of command afloat.

404. Advanced Communications and Basic Tactics. Three credit hours. Spring Quarter. Three recitations and one two-hour laboratory period each week.

The naval communication service in relation to administration and operation, together with the rudiments of technique without respect to the engineering problems involved. Tactical terms and definitions, disposition of ships in simple and compound formations, and the maneuver rules applicable to both in ordinary and emergency situations.

411. Ordnance. Three credit hours. Autumn Quarter. Three recitations and one two-hour laboratory period each week.

A broad study of naval armament from pistol to 16" turret, including rockets, guided missiles, mines, depth charges, torpedoes, and their projectors. Particular emphasis is given to dual purpose and major automatic weapons.

412. Fire Control. Three credit hours. Winter Quarter. Three recitations and one two-hour laboratory period each week.

Analysis of the elements of both surface and anti-aircraft problems in the control of gunfire, together with the basic mechanism used in fire control equipment and their assembly into systems.

414. Electronic Devices. Three credit hours. Spring Quarter. Three recitations and one two-hour laboratory period each week.

The principles of underwater sound transmission and reflection and their application to the tactics of anti-submarine warfare. The principles of micro-wave radio transmission and reflection and their application to detection and tracking of surface and aircraft, as well as their application to long range navigation.

521. Introductory Navigation. Three credit hours. Autumn Quarter. Three recitations and one two-hour laboratory period each week.

The elements of harbor and coastwise navigation to enable the student to conduct a ship from port to port while in frequent visual contact with land. The astronomical principles behind the determination of location on the earth's surface by observation of heavenly bodies.

522. Advanced Navigation. Three credit hours. Winter Quarter. Three recitations and one two-hour laboratory period each week.

The various methods of computing lines of position and similar data necessary to conduct a ship on transoceanic voyages. The devices used in aerial navigation and the reasons for departure from the surface problem solutions. Tactical graphics involving relative motion, as a ship changing position in a formation, an aircraft operating from a carrier, and a scout or search group operating from a fleet.

523. Advanced Tactics. Three credit hours. Spring Quarter. Three recitations and one two-hour laboratory period each week.

The general rules affecting the movements of all ships in obedience to standard signals as well as the variations peculiar to different types. The degree of safety from different threats of attack inherent in the various basic formations as well as the methods and occasions for shifting from one to another. The handling of destroyers and subchasers in the various types of attacks on submarines and the handling of submarines in the evasion of attack from surface craft.

525. Introductory Naval Engineering. Three credit hours. Autumn Quarter. Three recitations and one two-hour laboratory period each week.

The essentials of design, care and operation of the marine propulsion plant with respect to boilers and their various auxiliaries.

526. Advanced Naval Engineering. Three credit hours. Winter Quarter. Three recitations and one two-hour laboratory period each week.

The essentials of design, care and operation of the marine propulsion plant with respect to steam turbines, turbo-generators, and internal combustion engines, both gas and diesel.

527. Damage Control. Three credit hours. Spring Quarter. Three recitations and one two-hour laboratory period each week.

Detailed study of ship construction as it affects the ability to withstand damage from ground- ing or enemy action, together with the methods of restoring battle damage or limiting its dangers.

533. Military History and the Principles of War. Three credit hours. Spring Quarter. Three recitations and one two-hour laboratory period each week. For candidates for commission in the U. S. Marine Corps only.

Brief historical background of the U. S. Marine Corps, chronological study of the military

history of our country, stressing the correct and incorrect applications of the doctrines of combat, familiarization with basic infantry weapons and an elementary study of man and aerial photograph reading.

535. Marine Tactics. Three credit hours. Autumn Quarter. Three recitations and one two-hour laboratory period each week. For candidates for commission in the U. S. Marine Corps only.

The tactical employment and supply of elements which constitute a Marine Rifle Company, designed to give a working knowledge of the basic Marine Infantry unit and the duties of a company officer.

536. Marine Organization. Three credit hours. Winter Quarter. Three recitations and one two-hour laboratory period each week. For candidates for commission in the U. S. Marine Corps only.

Study of Marine organization both from the administrative and operational viewpoints, designed to further the training in the duties of the company officer as an administrator as well as in his duties as an operational commander in amphibious warfare.

537. Marine Operations. Three credit hours. Spring Quarter. Three recitations and one two-hour laboratory period each week. For candidates for commission in the U. S. Marine Corps only.

The principles of amphibious warfare by representing basic information on the major phases of amphibious assaults and the fundamental doctrines employed by the Navy and Marine Corps.

641. Naval Supply Ashore. Four credit hours. Autumn Quarter. Four recitations each week. Open to seniors in the Naval ROTC and to seniors in the College of Commerce and Administration.

The naval system of procurement, warehousing, stock control, and handling of material and material records ashore.

642. Naval Accounting and Supply Afloat. Four credit hours. Winter Quarter. Four recitations each week. Open to seniors in the Naval ROTC and to seniors in the College of Commerce and Administration.

The naval industrial accounting system, the procurement and distribution of supplies afloat, together with a study of the major and minor aspects of the logistic problems.

643. Miscellaneous Accounts and Aviation Supply. Four credit hours. Spring Quarter. Four recitations each week. Open to seniors in the Naval ROTC and to seniors in the College of Commerce and Administration.

Study of commissary, clothing, and small stores, and the procurement, distribution and identification of aeronautical materials.

NEUROLOGY AND PSYCHIATRY

Office, 308 Out-Patient Department, University Hospital

PROFESSOR PALMER

605. Clinical Psychiatry for the Graduate Nurse. Three credit hours. All Quarters. Prerequisite, Psychology 641, Sociology 402 or 407 and senior standing in the College of Education.

In this course graduate nurses will be instructed in the fundamental concepts of neuropsychiatric disorders including a survey of psychosomatic medicine. Given at Chicago State Hospital, Chicago, Ill.

Not open to students who have credit for Nursing 656.

NURSING

Office, Starling-Loving Hospital

ASSOCIATE PROFESSOR McKENNA, DIRECTOR

549. Orthopedics for Occupational Therapists. One credit hour. One Quarter. Autumn and Spring. Lectures and discussions. Prerequisite, Nursing 425. Dr. Lacey, Mrs. Conley.

A detailed consideration of orthopedic conditions, their treatment and care.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

602. Public Health-Nursing and Health Service in the Family. Five credit hours. One Quarter. Autumn and Spring. Five class meetings each week. Open only to students majoring in Nursing Education with junior standing in the College of Education or permission of the instructor. Miss Leazenbee.

A study of the history and development of Public Health Nursing together with a critical evaluation of the aims, objectives, and underlying principles involved.

610. Ward Management and Supervision. Three credit hours. Winter Quarter. Prerequisite, Psychology 407 and Sociology 402 or 407. Miss Thomas.

A consideration of the basic needs of the head nurse. Practical discussion and study of problems relating to ward management and teaching.

657. Supervised Practice in Psychiatric Nursing. Seven credit hours. All Quarters. Conferences, clinics, demonstrations. Prerequisite or concurrent, Neurology and Psychiatry 605 and senior standing in the College of Education.

Students will be assigned to hospital divisions in accordance with their backgrounds and needs. Supervised experience and direction in the care and handling of patients presenting a variety of psychiatric problems. Given at Chicago State Hospital, Chicago, Illinois.

658. Supervised Practice in Psychiatric Nursing, Advanced. Seven credit hours. All Quarters. Conferences, clinics and demonstrations. Prerequisite, Nursing 657. Institute of Living, Hartford, Connecticut.

A continuation of Nursing 657.

659. Supervised Practice in Psychiatric Ward Supervision. Seven credit hours. All Quarters. Prerequisite, Nursing 658 and 610. Institute of Living, Hartford, Connecticut.

Laboratory experience under guidance in the management and supervision of a psychiatric hospital unit. Study and evaluation of nursing care plans, together with direction and guidance of personnel. Emphasis will be placed on the teaching function of head nurse.

661. Supervised Teaching in Nursing. Seven credit hours. One Quarter. Autumn, Winter, Spring. Required of students in curriculum for Teachers of Nursing in Schools of Nursing. Prerequisite, senior standing in College of Education, Education 533 and 685, and an average point-hour ratio of 2.25 in each teaching field.

The teaching field in which the student is to be given supervised practice must be approved by the Director of the School of Nursing before registration.

Students enrolling for this course should endeavor to schedule other courses so as to leave the entire morning or afternoon free for observation and practice.

NOTE: For courses in The Teaching of Nursing and The Curriculum in Schools of Nursing, see the Department of Education, Courses 685 and 686.

OCCUPATIONAL THERAPY

Office, 105 Arps Hall

ASSOCIATE PROFESSOR JACKSON, MISS OTTO

500. Survey of Occupational Therapy. One credit hour. Autumn Quarter. Miss Jackson, Miss Otto.

History of the development of occupational therapy and a survey of its present day trends and applications.

This course is open to students in such allied fields as social service and nursing. Required of occupational therapy students who have not been a part of the occupational therapy section of Survey 407.

501. Elementary Theory of Occupational Therapy. One credit hour. All Quarters. Miss Jackson, Miss Otto.

Occupational Therapy techniques and correlation^e of theory with practical application. Pro-

professional etiquette and ethics. Supplementary reading with special attention given to the use of occupational therapy in the fields of pediatrics, tuberculosis, medical and surgical conditions.

Open only to students registered in Occupational Therapy.

510. Advanced Theory of Occupational Therapy. Two credit hours. All Quarters. Miss Jackson, Miss Otto.

Theory and techniques of occupational therapy in the fields of psychiatry, orthopedics, blindness and deafness, and other special disabilities. Craft analysis. Professional problems in record keeping, department organization and administration.

Open only to students registered in Occupational Therapy.

520. Clinical Training in Occupational Therapy. Six credit hours. All Quarters. By special arrangement with the Chairman of the Department of Occupational Therapy. Prerequisite for this course is an average point-hour ratio of 2.25 on all professional courses.

Initial registration in this course should come in the summer following completion of the ninth Quarter of the professional program and may be for one term or the Quarter.

This course provides practical experience in application of the principles of occupational therapy under the direction of the University Department of Occupational Therapy and the immediate supervision of registered therapists in affiliated hospitals. Students attend hospital lectures, conferences, and clinics during this period.

PHILOSOPHY

Office, 320 University Hall

PROFESSORS AVEY, CHANDLER, AND EVANS, ASSISTANT PROFESSORS REITHER, WATERS, AND LOWE, MR. HINSHAW

Seniors receive full credit for all courses in philosophy.

The courses fall into three groups. Those in the first group (Nos. 400-409) are elementary in character and have no prerequisite. They are designed primarily for students in the junior division who desire an introduction to philosophy as systematic reflection on the meaning and aims of human civilization, and as an aid in formulating a philosophy of life. Courses from this group may be taken in any order according to the interests and convenience of the students.

The courses in the intermediate group (501-670) are more advanced and have prerequisites, although these prerequisites are not always in philosophy. These courses are designed for students, whether intending to specialize in literature, the social or natural sciences, or in philosophy itself, who desire a more thorough acquaintance with the history of thought and with the fundamental issues of present-day science, religion, and practical life.

The following courses are relevant to all special interests since they deal with the most general underlying problems: 400, 401, 402, 405, 501, 502, 503, 653, 656, 661, 662, 665.

Courses related to literature and fine arts: 515, 508, 653, 662.

Courses related to mathematics and natural science: 402, 649, 652, 661.

Courses related to social science, psychology, and education: 405, 652, 653, 656, 661, 662, 665.

Courses related to commerce and journalism: 402, 405, 656, 665. Course 530 is especially recommended for students of law and commerce.

Courses related to religion: 401, 405, 406, 517, 520, 501, 502, 503, 508, 653, 656, 661, 662, 665.

Students concentrating in philosophy may be guided by their special interests, but are advised to include 402, 501, 502, 503, 661, and 662 in their programs. Students looking forward to graduate work in philosophy should lay fully as much stress upon securing a sound general cultural and scientific training as upon the special work of this department.

400. Types of Philosophy. Three credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Mr. Avey.

An elementary study of the essentials of the various types of philosophy which have been influential in world literatures, history, and science: Naturalism, Pragmatism, Dualism, Idealism, Mysticism.

Not open to students who have credit for Philosophy 401.

401. Introduction to Philosophy. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. All instructors.

The meaning and scope of philosophy, its typical problems and theories, its relations to the special sciences and to social life and religion. The course is intended primarily for Freshmen and Sophomores desiring a general introduction to philosophy; it is not required for admission to any other course.

Not open to students who have credit for Philosophy 400.

402. Logic and Scientific Method. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. All instructors.

A study of the methods, both material and formal, employed in the search for facts, the formulation and testing of general principles, and the application of principles to specific cases. Illustrations are drawn from the processes of common sense, science, history, and law.

405. Elementary Ethics. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. All instructors.

A critical and comparative study of ideals of human life, with applications to personal conduct and social institutions.

406. Religious Questions. Three credit hours. Winter Quarter. No prerequisite. Mr. Evans.

An elementary, non-sectarian study of the nature and influence of personal and institutional religion in contemporary civilization; an examination of the intellectual and social bases of religious experience.

409. Language and Logic. Three credit hours. Autumn Quarter. No prerequisite. Mr. Hinshaw.

An elementary course designed, first, to acquaint the student with logic through a study of the difficulties of human communication, and, second, to develop critical attitudes in writing, reading, and listening by a study of language.

501. Ancient Philosophy. Five credit hours. Autumn Quarter. Mr. Avey.

The development of philosophical thought from the Greeks through the Middle Ages. Most of the time is devoted to Greek philosophy. A natural continuation of this course will be found in Philosophy 502.

Not open to students who have credit for Philosophy 601.

502. Modern Philosophy to Hegel. Five credit hours. Winter Quarter. Mr. Chandler.

The development of philosophical thought from the Renaissance to the Nineteenth Century. A natural continuation of this course will be found in Philosophy 503. Philosophy 501 or 502 is recommended to advanced undergraduates of good scholastic standing as a first course in philosophy.

Not open to students who have credit for Philosophy 602.

503. Philosophy since Hegel. Five credit hours. Spring Quarter. Pre-requisite, Philosophy 502 or 401. Mr. Lowe.

The development of philosophical thought from the Nineteenth Century to the present. Special attention is given to the relations between philosophy, scientific developments, social movements, and literature.

Not open to students who have credit for Philosophy 603.

***506. American Philosophy.** Three credit hours. Autumn Quarter. Pre-requisite, ten hours in philosophy. Mr. Evans.

A survey of philosophical ideas in America. William James and John Dewey will be singled out for special consideration in the latter part of the course. Discussion of the probable future value of philosophical ideas developed in America in their bearing on the present world situation.

Not open to students who have credit for Philosophy 606.

508. Philosophy and Poetry. Three credit hours. Spring Quarter. Pre-requisite, Philosophy 401 or 405. Mr. Chandler.

A discussion of Lucretius, Dante's "Divine Comedy," Goethe's "Faust," for the light they throw on the history of thought and the nature of poetic excellence.

Not open to students who have credit for Philosophy 608.

515. Esthetics. Five credit hours. Winter Quarter. For Sophomores, Juniors, and Seniors. Prerequisite, one course in philosophy or fifteen hours in fine arts or music. Mr. Chandler.

A study of the various fine arts (including music and literature), and of the beauty of nature, with the aim of discovering their relation to human nature, their respective limitations, and their value for individual and social life.

* Not given in 1947-1948.

***516. The Meaning of Human Life.** Three credit hours. Spring Quarter. For Sophomores, Juniors, and Seniors. No prerequisite. Mr. Reither.

An introduction to the philosophy of man. The foundations in life and culture; the problems of values and standards; the various theories of human nature—dualism, materialism, spiritualism, triadism. The relation of humanistic philosophy to social philosophy and to the philosophies of history and religion.

***517. The Philosophy and Religion of the Far East.** Three credit hours. Spring Quarter. Mr. Avey.

A survey of the philosophic and religious ideas of India, China and Japan from the earliest times to the present and their influence upon the life and culture of these nations.

Not open to students who have credit for Philosophy 617.

520. The Philosophy and Religion of the Near East. Three credit hours. Winter Quarter. Mr. Avey.

A survey of the philosophic and religious ideas of Egypt, Palestine and Arabia including Judaism, Early Christianity and Mohammedanism, from the earliest times to the present and their influence upon the life and culture of these nations.

Not open to students who have credit for Philosophy 620.

604. Recent and Contemporary Philosophy. Three credit hours. Spring Quarter. Prerequisite, Philosophy 401, 405, 501, 502, 503 or 656. Mr. Evans.

Philosophical movements of the day, and their relation to current social problems.

***623. Representative Greek Philosophers.** Five credit hours. Winter Quarter. Prerequisite, Philosophy 401 and 601. Mr. Waters.

A study of selected works of Aristotle.

625. Representative Modern Philosophers. Three credit hours. Autumn Quarter. Prerequisite, Philosophy 502. Mr. Hinshaw.

A few representative works of classic thinkers of the period from Bacon and Descartes to Schopenhauer will be selected for intensive study.

649. Symbolic Logic. Four credit hours. Autumn Quarter. Prerequisite, Philosophy 402 or consent of the instructor. Mr. Waters.

A study of the transition from the traditional forms of Aristotelian Logic to the symbolic methods of the Nineteenth and Twentieth Centuries.

***652. Philosophy of Science.** Three credit hours. Autumn Quarter. Given in alternate years. Prerequisite, five hours of philosophy and ten hours of science, Philosophy 401 or 402, or their equivalent, or twenty hours in science. Mr. Lowe.

A study and critical discussion of a few general interpretations of the methods and basic assumptions of the natural and social sciences.

653. Philosophy of Religion. Five credit hours. Spring Quarter. Prerequisite, five hours of philosophy. Students are advised to take Philosophy 517 and 520 as a background for this course. Mr. Avey.

The psychical and social nature of religion; a systematic examination of the fundamental religious conceptions—the idea of God in relation to the idea of the world, the idea of man, and the problem of human destiny.

***656. Principles of Social Ethics.** Three credit hours. Spring Quarter. Prerequisite, one of the following: five hours of philosophy, Psychology 621, Education 603 or 632, or ten hours of social science. Mr. Reither.

Systematic development of a philosophy of human values, and its application to the chief forms and activities of civilized life—industrial and economic activities, the state, education, culture, and religion. The philosophies of Fascism, Nazism, Communism, and Liberal Democracy.

661. Metaphysics of Knowledge and Nature. Three credit hours. Winter Quarter. Prerequisite, two of the following: Philosophy 401, 501, 502, 503, 623, 625. Mr. Lowe.

A systematic consideration of the nature of scientific method and the scientific conception of nature in its bearings on the problems of man.

* Not given in 1947-1948.

***662. Metaphysics of Personality and Values.** Three credit hours. Spring Quarter. Given in alternate years. Prerequisite, two of the following: Philosophy 401, 501, 502, 503, 623, 625. Mr. Lowe.

A systematic consideration of the nature of the self and society, the problem of values, and the problem of the meaning of existence as a whole.

***665. Philosophy of History.** Three credit hours. Spring Quarter. Prerequisite, ten hours in philosophy and ten hours in the social sciences. Mr. Chandler.

A discussion of the place of history in the system of human knowledge, the humanistic significance of the historical attitude, the concepts of civilization, culture, development, and progress. The aim of the course is to formulate a philosophy of culture.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHONETICS

(See Speech)

PHOTOGRAPHY

Office, 4 Brown Hall

ASSOCIATE PROFESSOR DAVIS, ASSISTANT PROFESSOR WAGNER, MR. BINAU

511. Photography. Three credit hours. One Quarter. Autumn and Spring. Two lectures and six laboratory hours each week. No prerequisites. Mr. Davis, Mr. Binau.

Lectures and practice in the fundamentals of photographic processes. The use of the camera, characteristics of photographic emulsions, light filters and their uses, exposure problems, processing of negatives, contact printing, photographic optics, photographic chemistry.

515. Motion Picture Photography. Three credit hours. Autumn Quarter. Two lectures and one two-hour laboratory each week. Prerequisite, Photography 511 or 625, or permission of the instructor. Mr. Wagner.

This is an introductory course in the fundamentals of motion picture production and projection with special emphasis on 16mm field. History of the motion picture, operation of cameras, types of lighting, film processing, elements of projection, and screening of certain motion picture films.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

625. Scientific Photography. Three credit hours. Winter Quarter. Two lectures and recitations and two three-hour laboratory periods each week. Prerequisite, one year of Chemistry and one year of Physics. Mr. Davis, Mr. Binau.

This course is designed for students of physics, chemistry, astronomy, biology, and other sciences who need a knowledge of the principles and techniques of photography as an aid to their scientific work. Special attention is given to the nature of photographic processes, characteristics of photographic materials and the applications of photography to science. The laboratory exercises will be selected as far as possible to meet the needs of individual students.

650. Advanced Photography. Three credit hours. Winter Quarter. Two lectures and two three-hour laboratory periods each week. Prerequisite, Photography 511 or 625. Mr. Davis, Mr. Binau.

A continuation of Photography 511 or 625, dealing mainly with projection printing, portraiture, special effects, photo-engraving, lens testing, color photography, miniature camera work, and motion pictures.

699. Minor Problems in Photography. Three to five credit hours. Autumn and Winter Quarters. Conference, library, and laboratory work. Pre-

* Not given in 1947-1948.

requisite, Photography 511 or 625, and 650, fifteen hours of chemistry and/or physics, and consent of the instructor. This course may be repeated until the student has accumulated not to exceed ten credit hours. Mr. Davis, Mr. Wagner, Mr. Binau.

This course is designed to permit a properly qualified student to avail himself of the library and laboratory facilities of the department for adding to his knowledge and techniques in some subject in photography and for carrying out minor investigations.

PHYSICAL EDUCATION

MEN'S DIVISION

Office, 124 Physical Education Building

PROFESSORS *ST. JOHN, LARKINS, OBERTEUFFER, SNYDER, ASHBROOK, WIDDOES, FESLER, AND GODFREY, ASSOCIATE PROFESSORS DUFFEE, STALEY, CUSHMAN, COBB, DANIELS, MOONEY, AND PEPPE, ASSISTANT PROFESSORS HESS, BIGGS, C. WIRTHWEIN, H. WIRTHWEIN, DYE, STAHL, SELBY, STULTZ, AND HIXSON, MR. KEPLER, MR. SARKKINEN, MR. HANEY, MR. MONTONARO, MR. KATZENMEYER, MR. KOVACIC, MR. TRACOFF, MR. SLAGLE, MR. KROETEN, AND ASSISTANTS

WOMEN'S DIVISION

Office, 201 Pomerene Hall

PROFESSORS PALMER, ARMSTRONG, D. WIRTHWEIN AND PATERSON, ASSOCIATE PROFESSORS GILMAN, WATSON AND STEIN, ASSISTANT PROFESSORS ALLEN-BAUGH, ALKIRE, RUPERT AND YOST, MRS. BECKER, MISS GREGSON, MRS. SOHL, MISS SWILLEY, MISS MARTING, MISS YAGER, MISS NOBLE, MISS RIMPAU, MISS L. HAYS, MISS J. HAYS, AND ASSISTANTS

Students in the College of Education may major in physical education. This course prepares for all types of positions of leadership in the field of physical education, athletic coaching, recreation, and school health education.

Students in the College of Education may take courses in physical education for minimum certification of credits not to exceed thirty Quarter-credit hours, in addition to the required courses, 400, 411-412-418, 414-415-416 (Men's Division), and 400, 421, 422, 428, 425, 426, 427 (Women's Division), on the approval of the Chairman of the Department of Physical Education and the Dean of the College of Education.

Juniors and Seniors not specializing in physical education may elect one or more courses in addition to the courses required of all students. In each case the approval of the Chairman of the Department and of the Dean of the College of Education is necessary. Students in the Colleges of Agriculture, Arts and Sciences, Commerce and Administration, and Engineering wishing to take these courses must secure permission of the Deans of their respective Colleges and the Chairman of the Department of Physical Education.

NOTE: All students taking Physical Education as a teaching field or for minimum certification credit must secure the approval of the department adviser upon each Quarter's schedule before presenting the schedule card at the Registrar's Office. The adviser's approval must be indicated by his signature on the Secretary's and Registrar's sections of the schedule card.

SERVICE COURSES

400. Hygiene (Men and Women). One credit hour. All Quarters. One lecture each week. Required of every Freshman unless Physical Education 410 is taken during the first year of residence in the University. Sections for men, all instructors; sections for women, staff.

This course deals with the various factors and conditions which affect the health and efficiency of the student.

NOTE: Students in the four-year curriculum in Physical Education will not take this course, but will take Physical Education 410 instead.

401-402-403. Physical Education (Men). One credit hour. All Quarters. Two hours each week. Required of every Freshman. Staff.

Opportunity in these courses is given to elect, from a large number of group and individual sports, one activity which will contribute to the organic development and the recreational life of the student. Instruction in the techniques of play, the rules and strategies and the social behaviors involved in each activity are given. Special instruction for the physically handicapped is available. All work in these courses is based on a physical examination given at the beginning of the entering Quarter.

* Retirement effective July 1, 1947.

404. Physical Education (Men). No credit. All Quarters. Two hours each week. Required for three Quarters of all Naval Science students. Elective for others. This course may be taken not to exceed three times.

A continuation of Physical Education 401-402-403.

421-422-423. Physical Education (Women). One credit hour. All Quarters. Two hours each week. Required of every Freshman. Staff.

The work includes hockey, soccer, volley ball, swimming, dancing, golf, badminton, archery, bowling, tennis, table tennis, fencing, basketball, baseball, equitation, and individual activity.

425-426-427. Physical Education (Women). One credit hour. All Quarters. Three hours each week. Required of all Sophomores. Staff.

A continuation of Physical Education 421-422-423.

ELECTIVE COURSES FOR MEN DISQUALIFIED FOR MILITARY SCIENCE

525-526-527. Physical Education. One credit hour. All Quarters. Three hours each week. Open to Freshmen disqualified for elementary courses in Military Science. Staff.

These courses are similar in content to Physical Education 401-402-403.

528-529-530. Physical Education. One credit hour. All Quarters. Three hours each week. Open to Sophomores disqualified for elementary courses in Military Science. Staff.

These courses offer advanced training and instruction in various athletic sports.

PROFESSIONAL COURSES

410. Hygiene (Men and Women). Section for Men, five credit hours, Autumn and Spring Quarters. Section for Women, three credit hours, Winter Quarter. Three lectures each week. Must be taken by students in the Physical Education curriculum, and may be elected by others, instead of Physical Education 400. Section for men, Mr. Duffee; section for women, Miss Paterson.

The course aims to establish a basis for positive health and efficiency through a consideration of the various conditions and factors which affect health.

411-412-413. Physical Education Activities (Men and Women). One credit hour each Quarter. 411, Autumn Quarter; 412, Winter Quarter; 413, Spring Quarter. Ten laboratory hours each week. Required of all students who elect Physical Education as a major. Must be taken without credit for those men who have credit for Physical Education 401-402-403 and those women who have credit for 421-422-423. Under certain conditions and with consent of the department, these courses may be elected by a few other students in place of Physical Education 401, 402, and 403 for men or Physical Education 421, 422, and 423 for women. Staff.

The object of the course is to develop skill in and familiarity with a wide variety of physical education activities suitable for schools and recreation centers. Progress will be measured entirely in terms of achievement, and a student will be given credit for any unit in the course as soon as he is able to meet the standard set for such a unit.

414-415-416. Physical Education Activities (Men and Women). Men, no credit; women, one credit hour each Quarter. Must be taken without credit for those women who have credit for Physical Education 425, 426, and 427. 414, Autumn Quarter; 415, Winter Quarter; 416, Spring Quarter. Ten laboratory hours each week for men and six laboratory hours each week for women. Required of all students majoring in physical education. This requirement must be fulfilled by these students before they may proceed to the professional courses of the junior and senior years. Staff.

A continuation of Physical Education 411-412-413.

NOTE: The following courses in Physical Education are open to students in the College of Education. Students in the Colleges of Agriculture, Arts and Sciences, Commerce and Administration, and Engineering wishing to take these courses must secure permission of the Deans of their respective Colleges and the Chairman of the Department of Physical Education.

440. The Administration of Interschool Athletics (Men). Two credit hours. Spring Quarter. Two lecture periods each week. Mr. Larkins.

Scheduling contests; keeping records; making and administering eligibility rules; conducting meets and contests; administering plant and equipment; handling finances; making awards.

443. Theory of Physical Education (Men). Two credit hours. Spring Quarter. One lecture and three laboratory periods each week. Mr. Snyder.

Study in the theory, method, and mechanics of coaching track and field events.

446. Theory of Physical Education (Men). Three credit hours. Winter Quarter. Two lectures and three laboratory periods each week. Prerequisite, satisfactory evidence of skill in football playing. Mr. Godfrey.

Study in the strategy and mechanics of directing football, including a consideration of football rules, football fundamentals, individual and team play, offensive and defensive formations, organization and practice periods and educational values of sports.

447. Theory of Physical Education (Men). Two credit hours. Spring Quarter. One lecture and two two-hour laboratory periods each week. Prerequisite, satisfactory evidence of skill in baseball playing. Mr. Stahl.

Study in the theory, strategy, and mechanics of coaching baseball, including batting, base-running, and the playing of all positions.

449. Theory of Physical Education (Men). Two credit hours. Autumn Quarter. Two lectures and one laboratory period each week. Prerequisite, satisfactory evidence of skill in basketball playing. Mr. Dye.

Study in the theory, strategy, and mechanics of directing basketball, including various systems of offense and defense and team play, passing, goal throwing, dribbling, pivoting, organization of practice periods, judgment and psychology in handling of men.

†460. Folk Dancing (Men and Women). Two credit hours.

Practice in rhythm, folk, and tap dancing for the elementary and the junior high school.

†462. Advanced Folk Dancing (Men and Women). Two credit hours. Prerequisite, Physical Education 460 or equivalent. Miss Watson.

A continuation of Physical Education 460 with special emphasis on folk dances that will facilitate the transition from folk dancing to the dance as an art form.

†464. Modern Dance (Men and Women). One credit hour.

Practice in elementary developmental exercises for the purpose of establishing correct habits of balance and muscular control. Discussion of the relation of music to the dance. Practice in creating simple dance themes.

***467. Dancing for Boys (Men).** Two credit hours.

Practice in techniques and study of methods of teaching athletic, folk, social, and tap dancing.

†468. Tumbling, Stunts, and Self-testing Activities (Men and Women). Two credit hours.

Practice in techniques and study of methods of teaching.

†469. Group Games for Boys (Men). Two credit hours.

Participation and leadership experience in a large variety of individual, dual, group and team games suitable for elementary, junior high school, senior high school, playground and community centers. Special emphasis will be placed on program planning and leadership techniques.

473. First Aid (Men and Women). One credit hour. Winter Quarter. Two lecture-laboratory meetings each week. Required third year. Section for men, Mr. Biggs; section for women, Miss Gilman.

First aid to the injured in the home, school, and community. A consideration of first-aid practices with laboratory experience as well as lecture and discussion opportunities. Successful completion of this course leads to the Red Cross standard or advanced certificate in first aid.

***474. Individual Sports (Men and Women).** Two credit hours. Five lecture-laboratory hours each week.

A consideration of the methods of teaching individual sports developed through practice in the activities.

* Not given in 1947-1948.

† Not given during the academic year, 1947-1948.

476. Creative Physical Education for Elementary Teachers (Men and Women). Three credit hours. One Quarter. Autumn and Spring. One lecture and four laboratory periods each week. Miss Starling, Miss Gregson.

A course presenting the theory of physical activities as a medium of creative self-expression. Rhythmic expression, folk dancing, dramatization, plays and games suitable for the elementary school will be taught. The relation of music to the dance, and practice in creating simple dance themes will be included.

477. The Teaching of Golf (Men and Women). One credit hour. Spring Quarter. Prerequisite, satisfactory evidence of skill in the playing of golf. Mrs. Sohl.

Consideration of the methods of teaching golf developed through practice in the activity.

†482. Supervision of Playground and Community Recreation Activities (Men and Women). Two credit hours.

Discussion and planning of recreation programs in relation to community needs. Participation in handicrafts, nature study, individual and group activities and opportunity for planning and conducting playground and community programs.

***492. Elementary Individual Physical Education (Women).** Two credit hours.

An interpretation of physical education and medical examinations in relation to selection of suitable activities for individuals with postural defects, weak feet, general poor development, weakness after sprains, etc. Methods of detecting some of these defects and exercises for the correction and prevention of them will be studied.

541. Theory and Practice of Physical Education (Women). Three credit hours. Autumn Quarter. Six lecture-laboratory periods each week. Miss Allenbaugh.

Discussions, and readings on the developments occurring during childhood and adolescence and their relationship to physical education. The purpose of the course will be to acquaint the students with the interests and tendencies which occur during the various age periods and to prepare her to adapt physical activities to the individual. Games for elementary and junior high schools. Observation of children's classes.

542. Theory and Practice of Physical Education (Women). Three credit hours. Winter Quarter. Six lecture-laboratory periods each week. Prerequisite, Physical Education 541. Miss Allenbaugh, Miss Alkire.

Practice and theory of fundamental rhythms, analysis of rhythmic form and dance structure. Lead-up games and preliminary practice techniques and their relationships to development of the adolescent.

543. Theory and Practice of Physical Education (Women). Three credit hours. Spring Quarter. Six lecture-laboratory periods each week. Prerequisite, Physical Education 542. Miss Allenbaugh, Miss Alkire.

A study of the organization and administration of school and city playgrounds. Emphasis on planning programs of recreational activities for the summer playground. Opportunity to observe and teach children's classes. Practice in folk dancing and folk singing for schools. Opportunity will be given for the teaching of playground activities to children.

545. The Teaching of Physical Education (Women). Three credit hours. Autumn Quarter. One lecture and four laboratory periods each week. Prerequisite, satisfactory proficiency in Physical Education 411-416 inclusive, or the equivalent. Staff.

Modern trends in sports for women. Methods of teaching highly organized team sports. Discussion of methods of play, plans for development of advanced technique and organization of the season's work.

549. The Teaching of Swimming (Men and Women). Three credit hours. Spring Quarter. Section for Men: Five lecture-laboratory periods each week. Section for Women: Two lectures and four laboratory periods each week. Prerequisite, permission of the department adviser upon satisfactory evidence of skill in swimming. Miss Stein, Mr. Peppe.

Organization of water front activities in schools, camps, and recreation centers. Methods of teaching swimming, life saving, and canoeing. Special attention will be given to the selection of material used in elementary and secondary schools and colleges.

† Not given during the academic year, 1947-1948.

* Not given in 1947-1948.

550. Theory and Practice of Physical Education (Women). Three credit hours. Autumn Quarter. Two lectures and four laboratory periods each week. Prerequisite, Physical Education 542 or permission of the department adviser upon satisfactory evidence of knowledge and skill in dance. Miss Alkire.

Lectures, discussions, and readings dealing with the objectives and methods of teaching dance. Organization and planning of dance units in the school curriculum. Practice in teaching social, tap, and folk dancing.

551. Theory and Practice of Physical Education (Men and Women). Two credit hours. Each Quarter. Autumn, Winter, Spring. This course may be repeated until six credit hours have been earned. Three laboratory periods each week. Prerequisite, permission of department adviser. Staff.

Opportunity for more advanced work in sports technique, assignment of teaching projects in college classes. Students are required to teach (under supervision) one Physical Education activity class during the junior or senior year.

560. Camp Counseling. Three credit hours. Spring Quarter. Two lectures and four laboratory periods each week. Elective. No prerequisite. Miss Yost.

An elementary course for students in any college who serve in summer camp situations. Discussion of types of camps, objectives, principles and practice in program making, conduct of activities, evaluation, description of camp programs and policies, health and safety problems, camper guidance, and special events.

Not open to students who have credit for Physical Education 649.

570. Kinesiology and Therapeutic Exercises. Three credit hours. Spring Quarter. Four lecture-laboratory periods each week. Limited to students of Occupational Therapy. Prerequisite, anatomy and physiology. Miss Gilman, Miss Stein.

A study of the range, quality and capacities of movement of the human body. Special consideration will be given to the problems of the physically handicapped including analyses of movements involving muscle reeducation. Special reference will be given to therapeutic exercises.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

General Prerequisites for Courses Numbered from 600 to 799. For all courses in this group, the prerequisite is at least junior standing and twenty Quarter-hours in Physical Education and allied subjects of which a minimum of at least ten Quarter-hours must be in Physical Education; or thirty Quarter-hours in not more than two allied subjects.

†601. Principles of Football Coaching and Management (Men). Three credit hours. Prerequisite, coaching experience.

A course for advanced students of football. The course will consider the principles underlying various types of football strategy, the designing of plays, methods of teaching and controlling players; also, special problems of management, such as those connected with selecting, handling equipment, and making trips.

610. Health Education for Secondary Teachers. Three credit hours. Autumn Quarter. Three class meetings each week. Elective for all students preparing for secondary teaching except those in physical and health education. Mr. Cushman.

A study of health problems as they relate to the individual secondary school student, factors contributing to healthful living, the organization of a secondary school program, techniques for integration and correlation, resources in the community. Factors influencing the health of the teacher.

Not open for graduate credit.

615. Problems in Intramural Sports (Men and Women). Two credit hours. Spring Quarter. Two class meetings each week. Mr. Staley.

A critical analysis of intramural sports programs with a view to their justification from the standpoint of objectives, age level and contribution to the general welfare of the students participating. Problems of policy and administration of programs on the elementary, secondary, and college levels will be studied. Lectures, readings, reports, and discussions.

† Not given during academic year 1947-1948.

621. Principles of Physical Education (Men and Women). Five credit hours. One Quarter. Autumn and Spring. Prerequisite, open to physical education majors and others upon permission of the department adviser. Mr. Oberteuffer.

The nature of physical education, especially in relation to overlapping fields, such as health education and community recreation, and to education in general. A critical analysis of various objectives advanced; a review, with applications to physical education of modern conceptions of education and of modern principles in psychology and physiology.

625. Evaluation in Physical Education (Men and Women). Three credit hours. Winter Quarter. Two lectures and one two-hour laboratory period each week. Mr. Ashbrook.

A critical study of ways and means of evaluating biological, social and psychological outcomes of programs of physical education. Analyses of various specific tests and standards in use in school will be made.

630. Individual Physical Education (Men and Women). Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Physical Education 693. Section for men, Mr. Daniels; section for women, Miss Gilman.

The problems underlying the need for an individual physical education program for handicapped students. The primary emphasis will be on the organization and administration of the individual physical education program in schools and colleges; the formulation of individual programs of physical education for the most prevalent types of disabilities found in the school population and the techniques necessary for effective accomplishment of the objectives of the program.

631. The Teaching of Contemporary Dance (Women). Three credit hours. Winter Quarter. One lecture and four laboratory periods each week. Prerequisite, Physical Education 550 or the equivalent. Miss Alkire.

Lectures, readings, and discussions of the dance as an art. The study of body movement as an expressive medium based upon analysis of old and new dance forms. Practice in program-making and opportunity to assist in recital production.

632. Rhythmic Analysis (Men and Women). Three credit hours. Spring Quarter. Three laboratory periods each week. Prerequisite, permission of the department adviser upon satisfactory evidence of knowledge and skill in dance. Miss Alkire.

A study of the rhythmic pattern of body movement in more complex dance forms; the kinesthetic theory of rhythmic perception and the development of a discriminating sense of rhythmic values as carried into individual and group composition.

635. Current Problems in Physical Education for Girls and Women (Men and Women). Three credit hours. Spring Quarter. Prerequisite, experience in teaching in schools or college. Miss Palmer.

A discussion of outstanding problems in the organization of physical education programs for girls and women; policies, activities, types of competition, point systems, awards, and athletic associations.

641. Personal Health Problems (Men and Women). Three credit hours. Autumn Quarter. Three discussion periods each week. Mr. Oberteuffer.

A study of the problems of living as they involve the health of the adult. Problems of the adjustment of the individual to conditions of rural and urban life. An informational and problems course. Serves also as a basic subject matter course for advanced study in health education.

643. Principles of School Health Education (Men and Women). Three credit hours. Winter Quarter. Mr. Oberteuffer.

A basic survey of educational opportunities in health found in the various aspects of school life. Principles underlying the school health program. Survey of available teaching materials used in the classroom. Includes a study of official and non-official health agencies and their bearing upon the school health program. No discussion of the techniques of teaching.

644. The Teaching of Health in Secondary Schools and Colleges (Men and Women). Three credit hours. Spring Quarter. Three discussion periods each week. Prerequisite, Physical Education 643 or the equivalent. Mr. Oberteuffer.

How to teach and what to offer in hygiene or health classes. Discussions of the methods and subject matter used in presenting hygiene to students. Includes a study of the opportunities for integration of health material with other subjects of the organized curriculum.

645. Administrative Interrelationships of School Health Education (Men and Women). Three credit hours. Winter Quarter. Prerequisite, Physical Education 643. Miss Paterson.

This course proposes to continue the orientation of the student in matters of health education, with particular reference to public and organizational relationships. Problems of community preschool care, the follow-up work, community problems of programs for tuberculous children, crippled children, mental hygiene services. The relationships between the school personnel and medical, clinical, and nursing services in the community.

***646. Professional Preparation of Teachers in Physical and Health Education (Men and Women).** Three credit hours. Autumn Quarter. Three class meetings each week. Prerequisite, permission of the instructor.

The principles underlying the professional training of teachers in physical and health education; curriculum construction; selection of candidates; supervised teaching; staff personnel; problems pertaining to professional students.

647. The Teaching of Physical Education (Men and Women). Three credit hours. Sections for Men and Women, Winter Quarter. Two lectures and three laboratory periods each week. Prerequisite, satisfactory proficiency in Physical Education 411-416 inclusive, or equivalent. Section for men, Mr. Ashbrook; section for women, staff.

Lectures, discussions, demonstrations, and practice. Selection and organization of subject matter in different types of physical education classes. Techniques of instruction. Use of equipment. Modification of subject matter and procedure to meet varying school and community conditions.

648. The Teaching of Physical Education (Men and Women). Three credit hours. Spring Quarter. Two lectures and three laboratory periods each week. Prerequisite, satisfactory proficiency in Physical Education 411-416 inclusive, or the equivalent. Section for men, Mr. Ashbrook; section for women, staff.

A continuation of Physical Education 647.

649. Camp Administration (Men and Women). Three credit hours. Spring Quarter. Three lecture-laboratory periods each week. Prerequisite, experience in camp counselling. Mr. Staley.

The organization and direction of camps, particularly summer camps for boys and girls. Special attention is given to the social and educational program for adolescents. Designed for those preparing for administrative positions. Consideration of budgets, equipment, camp sites, program personnel. Practical observations and demonstrations.

Available for graduate credit only for students majoring in education, physical education, and social administration.

651. Minor Problems in Physical Education (Men and Women). One to four credit hours. Autumn, Winter, and Spring Quarters. Prerequisite, permission of the adviser. The staff.

Investigation of minor problems in the field of physical and health education.

682. Organization and Administration of Physical Education (Men and Women). Five credit hours. Winter Quarter. Five lectures each week. Prerequisite, Physical Education 621 or its equivalent. Section for men, Mr. Daniels; section for women, Miss Palmer, Mrs. Wirthwein.

The policies in the organization and administration of the Physical Education program; classification of students, staff, teaching load, time schedule, finances, etc. The administration of the physical education plant; gymnasium, locker rooms, swimming pool, equipment, records. Intra-school relationships.

685. Prevention and Care of Injuries (Men). Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, ten hours of anatomy and physiology. Mr. Biggs.

A consideration of the methods of prevention and care of injuries occurring in physical education and competitive sports. The course also includes a discussion of the conditioning of men for athletic contests.

* Not given in 1947-1948.

691. Kinesiology (Men and Women). Three credit hours. Section for men, Autumn and Winter Quarters, Mr. Stultz; section for women, Winter Quarter, Miss Stein. Four lecture-laboratory periods each week. Prerequisite, acceptable courses in human anatomy and physiology.

The science of bodily movement. Basis for: prescription of activities in individual physical education; identification of common athletic injuries; form and style in athletic performance-analysis of coordination in sports, gymnastics, and ordinary activities of daily life.

Open only to majors in physical education.

692. The School Health Service (Men and Women). Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Physical Education 643 or its equivalent. Mr. Cushman.

A consideration of the problems in connection with the health of the school child and teacher. Discussions and reports relating to medical inspection, physical examinations, symptoms and control of common school diseases, malnutrition, and the health environment of the school child. Observations in schools of physical examinations, systems of record keeping, follow-up services, malnutrition, and of the classes for the handicapped will be made.

693. Physical Examinations and Therapeutic Gymnastics (Men and Women). Five credit hours. Section for men, Autumn and Spring Quarters. Two lectures and three laboratory periods each week. Mr. Daniels. Section for women, Spring Quarter. Four lectures and one laboratory period each week. Prerequisite, Physical Education 691. Miss Gillman.

A consideration of the school health examination: purposes, nature and methods of administering; the health examination as the basis of student classification for physical education; health examination findings and physician's prescription as the foundation of the individual physical education program; study of the most common departures from normal with respect to defects, disabilities and symptoms of childhood handicaps; laboratory experience in use of the health examination, and program prescription for prevalent types of defects and disabilities encountered in the school population.

Open only to majors in physical education.

NOTE: For course in the History of Physical and Health Education, see the Department of Education, Course 642.

For course in the Physiology of Exercise, see the Department of Physiology, Course 640.

For course in Health Education for Teachers, see the Department of Education, Course 664.

For course in Public Recreation: Its Organization and Administration, see the Department of Social Administration, Course 855.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

PHYSICS AND ASTRONOMY

Office, 107 Mendenhall Laboratory

PROFESSORS NIELSEN, BLAKE (EMERITUS), LANDE, POOL, SHORTLEY, ALPHEUS SMITH (EMERITUS), AND ALVA SMITH, ASSOCIATE PROFESSORS HEIL, HESTHAL, KARBATOV, SHAFFER, SHAW, WILLIAMS AND ZUMSTEIN, ASSISTANT PROFESSORS COOPER, DAUNT, AND OETJEN, MR. DICKEY AND ASSISTANTS

(a) Students desiring a survey in physics and astronomy as part of a liberal education should register for General Studies in Physics and Astronomy 431 and 432. The distinction between physics and astronomy is not recognized in these courses. There is rather an attempt to unify these sciences.

(b) Physics 411, 412, and 418 give a survey of the field of physics with considerable emphasis on recent developments in the electron theory of matter.

(c) Astronomy 500 is designed primarily for students who desire to obtain some knowledge of astronomy but have only a brief time to devote to the subject.

GENERAL STUDIES IN PHYSICS AND ASTRONOMY

431. Nature of the Physical World. Five credit hours. One Quarter. Autumn and Spring. Four lectures and one demonstration period each week. The

McMillen Observatory and its refracting telescope will also be used for observation. Mr. Hesthal.

This course ignores distinctions between modern physics and astronomy and discusses phenomena that are commonly encountered or likely to be encountered by the average individual. It selects its subject matter from both sciences in such a way as to give an elementary but comprehensive picture of the physical universe. Phenomena including the latest developments in science are discussed in a descriptive, explanatory manner and no previous scientific or mathematical training is assumed.

432. Nature of the Physical World. Five credit hours. Winter Quarter. Four lectures and one demonstration period each week. The McMillen Observatory and its refracting telescope will also be used for observation. Mr. Hesthal.

A continuation of General Studies in Physics and Astronomy 431.

It is not necessary that General Studies in Physics and Astronomy 431 precede this course.

PHYSICS

411. General Physics: Mechanics, Wave Motion, and Sound. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lectures and recitations and one two-hour laboratory period each week. Prerequisite, two entrance units in mathematics. Mr. Alva Smith and staff.

412. General Physics: Heat, Light, Spectroscopy. Five credit hours. One Quarter. Winter and Spring. Four lectures and recitations and one two-hour laboratory period each week. Prerequisite, Physics 411. Mr. Alva Smith and staff.

413. General Physics: Magnetism, Electricity, and Electronics. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lectures and recitations and one two-hour laboratory period each week. Prerequisite, Physics 411. Mr. Alva Smith and staff.

420. Meteorology. Five credit hours. Spring Quarter. No prerequisite. Mr. Daunt.

A study of the elements of weather and weather forecasting. Special attention is given to the weather in Columbus and to the daily weather maps.

501. Geometrical Optics. Five credit hours. Autumn Quarter. Three lectures and recitations and two two-hour laboratory periods each week. Prerequisite, Physics 411-412-413 and Mathematics 421-422. Mr. Pool and staff.

This course treats of the fundamental principles and methods of geometrical optics, with special reference to refractive indices, prisms, thin lenses, cylindrical lenses, combinations of thin lenses and thin lens systems, etc.

502. Geometrical Optics. Five credit hours. Winter Quarter. Three lectures and recitations and two two-hour laboratory periods each week. Prerequisite, Physics 501. Mr. Pool and staff.

A continuation of Physics 501. It treats of thick lenses, combinations of lenses and mirrors, optical instruments used in conjunction with the eyes, magnifying power, chromatic and spherical aberration, diffraction, interference, etc.

503. Geometrical and Physical Optics. Five credit hours. Spring Quarter. Three lectures and recitations and two two-hour laboratory periods each week. Prerequisite, Physics 502, or permission of instructor. Mr. Pool and staff.

Continuation of Physics 502; defects of image formation and their correction: interference and diffraction: polarization: dispersion and anomalous dispersions: optical rotation: double refraction: absorption of light: color vision: application to design and construction of optical instruments.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Unless otherwise indicated, the prerequisites for "600" and "700" courses are one year of calculus and one year of college physics.

603. Heat and Thermodynamics. Three credit hours. Autumn Quarter.
Mr. Daunt.

Introduction to the fundamental ideas of physical thermodynamics with applications to physical systems.

604. Statistical Theory of Gases. Three credit hours. Spring Quarter.
Mr. Daunt.

Introduction to the fundamental ideas of statistical mechanics and gas kinetics.

605. Geometrical Optics. Three credit hours. Autumn Quarter. Two lectures and one two-hour laboratory period each week. **Mr. Oetjen.**

Advanced theory of geometrical optics including thick lenses, types of mirrors, combinations of lenses and mirrors, apertures, and aberrations in optical systems.

606. Physical Optics. Three credit hours. Winter Quarter. Two lectures and one two-hour laboratory period each week. **Mr. Oetjen.**

An introductory course in physical optics covering nature and propagation of light and such optical phenomena as interference, diffraction, polarization and double refraction.

Not open to students who have credit for Physics 617.

607. Design and Theory of Optical Instruments. Three credit hours. Spring Quarter. Two recitations and one two-hour laboratory period each week. Prerequisites, Physics 605 and 606 or Physics 503. **Mr. Oetjen.**

Design and properties of various optical instruments used in research; resolving power of instruments; optical properties of materials.

608. Advanced Electricity. Three credit hours. Autumn Quarter. **Mr. Heil.**

An introductory course in the mathematical theory of electricity and magnetism. The topics treated are electrostatic fields, magnetostatic fields, magnetic fields and steady currents, dielectric polarization, magnetization.

610. Conduction of Electricity through Gases. Three credit hours. Winter Quarter. **Mr. Heil.**

An introductory course on the passage of electricity through gases and evacuated tubes, ionic velocities, photo-electricity, cathode rays and positive rays.

611. Thermionics and High Vacuum Phenomena. Three credit hours. Spring Quarter. **Mr. Heil.**

Physical theory of thermionic emission and vacuum tubes; application of thermionic devices to production, amplification and detection of electrical oscillations; production and measurement of high vacua.

Not open to students who have credit for Physics 622.

612. Periodic and Transient Electric Currents. Three credit hours. Winter Quarter. Two lectures and one two-hour laboratory period each week. **Mr. Alva Smith.**

An introductory course on the response of circuits with constant parameters to variable applied voltages.

613. Electromagnetic Field Phenomena. Three credit hours. Spring Quarter. Prerequisite, Physics 608. **Mr. Alva Smith.**

An introductory course in Maxwell's theory of the electromagnetic field.

615. Introduction to Nuclear Physics. Four credit hours. Autumn Quarter. Four lectures and recitations each week. **Mr. Pool.**

Review of recent experimental methods and data on transmutation of the elements by bombardment with protons, deuterons, neutrons and alpha rays; artificial radioactivity; detection of nuclear disintegration products. Simple experiments are performed with cloud chambers, geiger counters, ionization chambers and the cyclotron.

616. Advanced Physical Laboratory. Three credit hours. Any Quarter. Two three-hour laboratory periods each week. Prerequisite, one year of college physics. Mr. Heil.

This course is intended to give the advanced student in science practice in precise physical measurements, involving the use of high grade mechanical, optical, electrical and thermal instruments.

The work undertaken will be elected from the following topics:

- (a) Mechanics and Heat.
- (b) Optical Measurements.
- (c) Electrical Measurements.
- (d) Ionization and Radioactivity.
- (e) Pyrometry and High Temperatures.
- (f) Acoustics.
- (g) Spectroscopy.

Any one of the above topics may be selected during any Quarter with the exception of topic (d) which is offered only during the Winter Quarter.

A student may repeat this course until he has obtained a maximum of twenty-four credit hours. A student may accumulate not more than six credit hours in any one of the above topics.

618. Modern Atomic Spectroscopy. Three credit hours. Winter Quarter. Mr. Williams.

Introduction to classification of line spectra of atoms, including discussion of such topics as quantum numbers, selection rules, line strengths, Zeeman and Stark effects, and forbidden transitions.

619. Spectra and Structure of Molecules. Three credit hours. Spring Quarter. Given in alternate years. Mr. Nielsen.

Review of experimental methods and data on band spectra of molecules; empirical classification of spectra and correlation with molecular energy states; relation of energy expressions to molecular structure; selection rules and intensities of transitions; macroscopic properties of molecules obtained from band spectra; applications to chemical problems.

620. X-rays and Atomic Structure. Four credit hours. Autumn Quarter. Four lectures and recitations each week. Mr. Cooper.

Production, measurement and effects of X-rays, including gamma rays; classical electron theory of the reflection, refraction, absorption, and scattering of X-rays; quantum theory of the origin of X-ray spectra and structure of heavy atoms.

621. Wave Motion and Sound. Four credit hours. Winter Quarter. Three lectures and one two-hour laboratory period each week. Mr. Shaw.

Theory of wave motion; production, propagation and detection of sound waves; ultrasonic phenomena; acoustical measurements; architectural acoustics.

630. Minor Problems in Physics. One to fifteen credit hours. Any Quarter. Conference, library, and laboratory work. Prerequisite, satisfactory advanced courses in experimental and theoretical physics. All instructors.

This course is designed to permit any properly qualified student to avail himself of the library and laboratory facilities of the department for adding to his knowledge and techniques in some subject in physics, for repeating classical physical experiments, or for carrying out minor investigations. Among the topics on which experimental work can be arranged are the following:

- (a) Acoustics
- (b) Chromatic photometry
- (c) Electrical and magnetic measurements at different frequencies
- (d) High vacuum phenomena and techniques
- (e) Photoelectricity and thermionics
- (f) Pyrometry
- (g) Radioactivity and atomic disintegration
- (h) Visible, ultra-violet, and infra-red spectroscopy
- (i) X-rays and crystal structure.

Students who have specialized interest in some field of physics may elect this course to secure an opportunity for *independent reading and study* under the supervision of an instructor. The student will be permitted to choose the instructor and, subject to his approval, the field in which this reading is to be done.

645. Acoustics for Students of Music and Speech. Three credit hours. Winter Quarter. This course cannot be counted toward a major in physics. Prerequisite, junior standing in music or speech. Mr. Shaffer.

A descriptive non-mathematical treatment of acoustics with applications to music and speech, including such topics as the following: production, propagation and reception of sound; characteristics of sounds; room acoustics; acoustical apparatus; hearing; etc.

***647. Physics of the Atmosphere.** Three credit hours. Autumn Quarter. Three class meetings each week.

Application of principles of physics to such atmospheric processes as heating and cooling, motion of air masses, temperature variations, evaporation and condensation, radiation; electrical, optical and acoustical phenomena of the atmosphere.

726. Methods of Theoretical Physics. Three credit hours. Autumn Quarter. Mr. Shaffer.

An introductory course coordinating the methods of solving problems in such fields of classical physics as dynamics of particles and systems of particles, wave motion, electrodynamics, heat flow, etc. The course is especially adapted to needs of students in chemistry and engineering but is also open to students majoring in physics.

Not open to students who have credit for Physics 626.

727. Methods of Quantum Mechanics I. Three credit hours. Winter Quarter. Mr. Shaffer.

Introduction to Schrodinger and matrix techniques of quantum mechanics; applications to simple problems, particularly those of chemical interest; perturbations, quantum mechanical resonance; etc. It is helpful for Physics 726 or 740 to precede this course.

Not open to students who have credit for Physics 627.

728. Methods of Quantum Mechanics II. Three credit hours. Spring Quarter. Prerequisite, Physics 727. Mr. Shaffer.

A continuation of Physics 727 with applications to more complicated problems; mechanics of atoms and molecules; approximate methods of solution.

740-741-742. Introduction to Theoretical Physics. Three credit hours. Autumn, Winter, Spring Quarters. Prerequisite or concurrent, Mathematics 601. Mr. Shortley.

Mechanics of particles and rigid bodies. Introduction to theory of elasticity, dynamics of compressible and incompressible fluids, and boundary value problems of theoretical physics.

Not open to students who have credit for Physics 623-624-625.

***754. X-rays and Crystal Structure.** Four credit hours. Winter Quarter. Given in alternate years.

This course is designed for those students of physics, chemistry, and mineralogy who intend to do research work in crystal structures and X-ray analysis.

Not open to students who have credit for Physics 654.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 684.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

* Not given in 1947-1948.

ASTRONOMY**Office, Emerson McMillin Observatory****PROFESSOR (EMERITUS) MANSON, ASSOCIATE PROFESSOR HYNEK, DIRECTOR****Office, Perkins Observatory, Delaware, Ohio****PROFESSOR BOBOVNIKOFF, DIRECTOR ASSOCIATE PROFESSOR HYNEK,
ASSISTANT PROFESSOR KEENAN AND MR. DEUTSCH**

Attention is called to the facilities available for instruction and research in astronomy. These include the McMillin Observatory with a 12.5 inch refracting telescope on the campus and the Perkins Observatory with a 69 inch reflecting telescope which is the third largest in the United States. These facilities are used in all astronomy courses.

500. Descriptive Astronomy. Five credit hours. One Quarter. Autumn and Spring. Mr. Hynek.

This is an introductory course designed to give an appreciation of the place of astronomy in man's cultural and scientific development. Chief emphasis is on the descriptive and historical aspects of the subject. This course is suitable for students who have time for only one Quarter's work in astronomy.

501. General Astronomy I. Five credit hours. Autumn Quarter. Prerequisite, Mathematics 422. Mr. Hynek.

Astronomy 501 and 502 form a comprehensive introduction to the methods, instruments and factual content of modern astronomy. Astronomy 501 deals primarily with the solar system and the earth as an astronomical body.

502. General Astronomy II. Five credit hours. Winter Quarter. Prerequisite, Astronomy 501. Mr. Hynek.

This course is a continuation of Astronomy 501 and deals with the stellar universe and elements of physical astronomy.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For "600" courses in Astronomy to be used as electives, see Bulletin of the College of Arts and Sciences.

701. Introduction to Astrophysics. Three credit hours. Spring Quarter. Prerequisite, Physics 618 and 604. Mr. Hynek and Mr. Keenan.

Application of physical principles to study of the stellar universe; use of the laws of spectroscopy and gas kinetics to infer the structure of stellar atmospheres from their radiations.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate course in this department see the bulletin of the Graduate School.

PHYSIOLOGY**Office, 204 Hamilton Hall**

PROFESSORS HARTMAN, HITCHCOCK AND BOZLER, ASSISTANT PROFESSORS ANGERER, GRUBBS AND WHITEHORN, MR. THATCHER, AND MISS BROWNELL

407. Elementary Physiology. Four credit hours. Winter Quarter. Three lectures or recitations and three laboratory periods each week. Department staff.

A survey of the entire field of physiology except reproduction.

410. Introduction to Physiology. Five credit hours. Spring Quarter. Four lectures and one three-hour laboratory demonstration each week. Elective. No prerequisites. Department staff.

A general study of the entire field of physiology with special reference to man. This

includes: the properties of muscle and nerve; the role of the central nervous system; the special senses; nutrition; circulation; respiration; excretion; endocrine glands; and reproduction.

Not open to majors in the Department of Physiology.

506. Elementary Physiology. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lectures or recitations and three laboratory hours each week. Prerequisite, two Quarters of chemistry. Mr. Angerer, Mr. Grubbs and staff.

The fundamental principles governing the activity of living organisms, including the chemical composition and physical structure of animate matter; tissues; muscle-nerve physiology; blood and lymph; fundamental structure and functions of the nervous system, including reflex actions; cardiovascular system.

Not open to students who have credit for Physiology 403.

507. Elementary Physiology. Five credit hours. One Quarter. Autumn, Winter, Spring. Four lectures or recitations and three laboratory hours each week. Prerequisite, Physiology 403. Mr. Angerer, Mr. Grubbs and staff.

An elementary survey of respiration, foods, digestion, metabolism, excretion, endocrines, brain, and special senses.

Not open to students who have credit for Physiology 404.

***508. Elementary Physiology.** Five credit hours. Spring Quarter. Four lectures or recitations and three laboratory hours each week. Prerequisite, two Quarters of elementary physiology.

A more detailed study of certain physiological systems that have been briefly presented in Physiology 403 and 404, e.g., nervous system, special senses and cardiovascular system.

Not open to students who have credit for Physiology 405.

***510. Physiology.** Five credit hours. Winter Quarter. Three lectures and four laboratory hours each week. Prerequisite, Zoology 401, Chemistry 407-408, and Anatomy 412. Department staff.

This course deals with the cardiovascular system and the respiratory system.

Open only to students majoring in Physical Education, except by permission of the chairman of the department.

***511. Physiology.** Five credit hours. Spring Quarter. Three lectures and four laboratory hours each week. Prerequisite, Physiology 510. Department staff.

A continuation of Physiology 510 with emphasis on nutrition and energy metabolism.

Open only to students majoring in Physical Education, except by permission of the chairman of the department.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

***625. Advanced Mammalian Physiology.** Five credit hours. Winter Quarter. Two lectures and three three-hour laboratory periods each week. Prerequisite, Physiology 626, 627, 628, or equivalents. Department staff.

An advanced course in the physiology of the mammal, based largely on laboratory experiments.

626. Comparative Physiology. Five credit hours. Autumn Quarter. Four lecture hours and three laboratory hours each week. Prerequisite, two Quarters of chemistry and three Quarters of biological sciences. Department staff.

General properties of cells (including contractility and irritability), the body fluids, the circulation, and the kidney in different animal types.

627. Comparative Physiology. Five credit hours. Winter Quarter. Four lecture hours and three laboratory hours each week. Prerequisite, Physiology 626. Department staff.

Metabolism, respiration, digestion, secretion and excretion in different animal types.

* Not given in 1947-1948.

628. **Comparative Physiology.** Five credit hours. Spring Quarter. Four lecture hours and three laboratory hours each week. Prerequisite, Physiology 627. Department staff.

Hormones, nervous system and sense organs in different animal types.

*629. **Endocrinology and Metabolism.** Five credit hours. Spring Quarter. Four lectures or recitations and one three-hour laboratory period each week. Prerequisite, two Quarters of Physiology or equivalent biological sciences. Department staff.

A survey of animal metabolism and of the endocrine system with emphasis on their inter-relationships.

640. **Physiology.** Five credit hours. Winter Quarter. Three lectures and two three-hour laboratory periods each week. Prerequisite, Physiology 510 and 511 or equivalent. Mr. Hitchcock and staff.

A course in the neuromuscular and integrative systems with particular reference to exercise.

Open only to students majoring in Physical Education, except by permission of the chairman of the department.

700. **Minor Problems.** One to fifteen credit hours. Autumn, Winter, and Spring Quarters. Designed for qualified students who wish to begin research. Permission of department chairman required for registration.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "500" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

POLITICAL ECONOMY

(See Economics and Sociology)

POLITICAL SCIENCE

Office, 100 University Hall

PROFESSORS †MANSFIELD, SPENCER, WALKER, HELMS, AND AUMANN, ASSOCIATE PROFESSORS HEIMBERGER, ASSISTANT PROFESSORS ROBBINS, GILPATRICK, AND †HECKMAN, MR. HAMILTON, MR. KESSELMAN, AND ASSISTANTS

401. **American National Government.** Five credit hours. One Quarter. Autumn, Winter, Spring. Department staff.

A general survey of the organization and functions of the national government. The nature of federalism; popular participation in governing; extent and character of national powers; changing relation of national government to the states and to the individual.

402. **Foreign Governments and Politics.** Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Political Science 401 or History 401-402 in sequence. Department staff.

A comparative study of the governmental systems of foreign states with emphasis upon Great Britain, Russia, France, Germany, Italy, China and Japan. Attention will be given to the enduring heritage of political institutions as well as to new problems, theories and practices emerging during the periods after World Wars I and II.

410. **American State and Local Government.** Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Political Science 401. Department staff.

A general survey of the organization and functions of the states and their municipal subdivisions in the United States. The constitutional bases of state government; political parties

* Not given in 1947-1948.

† Appointment effective October 1, 1947.

and popular control; the suffrage; the state legislature and its work; the office of governor; judicial and legal problems.

Special attention is given throughout to the organization and operation of state and local government in Ohio.

Not open to students who have credit for Political Science 403.

500. American Municipal Government. Five credit hours. One Quarter. Autumn and Spring. Prerequisite, Sophomore standing or ten hours in political science. Mr. Helms.

A comparative study of modern municipalities in the United States; their social significance; their governmental structure; their relation to the state; the experience with government by council, mayor, commission, and manager; methods of popular participation.

Not open to students who have credit for Political Science 607 or 595.

599. Introduction to Political Science. Three credit hours. One Quarter. Autumn, Winter, Spring. Open to seniors without prerequisite. Not open to students with credit in political science. Mr. Heckman.

An acquaintance with the most significant aspects of American national, state and local government, including political parties, elections, legislation, civil service, and courts; the parliamentary and authoritarian governments of Europe; international government. Lectures, readings, and discussions.

Not open to students who have credit for Political Science 600.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Majors in economics, education, geography, history, philosophy, social administration, sociology, may be admitted to these courses without the political science prerequisite, by special permission of this department.

605. Principles of Public Administration I. Five credit hours. Autumn Quarter. Prerequisite, ten hours in political science. Mr. Walker, Mr. Mansfield.

A consideration of the general problems of public administration; principles of governmental and administrative organization; control over administration; the civil service; personnel administration; budgets and accounting; centralized purchasing; public reporting and other staff functions.

606. Principles of Public Administration II. Five credit hours. Winter Quarter. Four lecture and discussion sessions and one field interview each week. Prerequisite, fifteen hours in political science. Mr. Walker, Mr. Mansfield.

An examination of the principles of public administration as applied to the rendering of service to the public by national, state, and local governments. Attention will be paid to such functions as the protection of life and property, the promotion of trade and commerce, the regulation and operation of public utilities, city and metropolitan planning, and the furtherance of public welfare, noting in each case the part which is played by each of the levels of government.

The laboratory for courses in public administration lies in the offices and institutions of government. The field work in this course will require personal interviews with public officers and weekly papers based upon them. This portion of the course will require two to five hours per week.

611. Introduction to Jurisprudence. Five credit hours. Autumn Quarter. Prerequisite, Political Science 401 and 402. Mr. Spencer.

An introductory study of legal concepts. An attempt is made both to give the prospective law student an analytical and historical guide into his subject, and to give those who do not intend to pursue the study of law an idea of its significance in social organization, and its relation to political and economic science.

612. International Law. Five credit hours. Winter Quarter. Prerequisite, Political Science 401 and 402. Mr. Robbins.

A study of the principles of international law, including analysis of theories concerning its nature and fundamental conceptions, from the Seventeenth Century to the present; its relation to national law; problems of international legislation and codification. Use will be made of Supreme Court decisions and analogous materials.

613. Contemporary International Politics. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Political Science 401 and 402. Mr. Helms, Mr. Robbins.

Methods and ideals of diplomacy; current problems in international relations, such as the reorganization of Europe, Pan-Americanism, and the Far East; tendencies toward administrative, judicial, and legislative world-organization.

615. Administration of Justice. Three credit hours. Spring Quarter. Prerequisite, ten hours in political science. Mr. Aumann.

A study of the nature, purposes and limitations of law as administered through courts. The development, organization, and procedure of our judicial system. Recent trends in legal thinking.

616. American Constitutional Law. Five credit hours. Winter Quarter. Prerequisite, ten hours in political science. Mr. Aumann.

A study of leading constitutional principles in the United States as interpreted by the courts. Special studies will be made of such topics as the following: the adoption and amendment of constitutions; the judicial power; citizenship; private rights; the powers of Congress; war powers; police powers of the states; political privileges. Designed for students who desire a non-technical knowledge of the more important federal and state constitutional principles in the United States.

625. Great Britain and the British Commonwealth. Five credit hours. Spring Quarter. Prerequisite, Political Science 401 and 402. Mr. Heimberger.

An advanced study of the government of Great Britain with emphasis upon political parties, Parliament and the Cabinet. A critical examination of the British Empire, including India, the crown colonies and the protectorates. The British Commonwealth as an association of self-governing states, with individual attention to Canada and the other dominions. The special problem of Eire.

628. New European Governments. Three credit hours. Autumn Quarter. Prerequisite, Political Science 402. Mr. Spencer.

The states of Continental Europe as affected by the crises of revolution and war, and of post-war reconstruction. Special attention given to Russia, France, Italy, and Germany. Problems of monarchic versus presidential leadership, of parliamentary representation and parties, of local autonomy and the rights of the individual.

629. Soviet Union in World Affairs. Three credit hours. Winter Quarter. Prerequisite, Political Science 402.

An intensive study of the Soviet Union from the standpoint of its internal organization and the role, which it plays in world affairs; one form and operation of the Soviet state, Soviet socialism; the significance of the single party system, the USSR as a party power and the problem of "East-West" relations.

633. Legislation. Three credit hours. Spring Quarter. Prerequisite, ten hours in political science. Mr. Walker.

The process of law making in the United States, the constituent process, statute law making, legislative drafting, legislative procedure, judicial review, the common law, executive ordinance, popular law making.

634. Public Opinion and Political Processes. Five credit hours. One Quarter. Autumn and Spring. Prerequisite, ten hours in political science. Mr. Heckman.

Nature and measurement of public opinion and its effect on political processes; genesis of political attitudes; propaganda of pressure groups; government propaganda in peace and war; political influence of social institutions, including press, radio, and movies. Lectures, discussions, and report.

635. American Political Parties and Pressure Groups. Five credit hours. One Quarter. Winter and Spring. Prerequisite, ten hours in political science. Mr. Helms.

An analysis of the organization, programs and campaign methods of political parties and of such pressure groups as labor, business, agriculture, etc. Methods of nomination, suffrage qualifications, campaign finance, government regulation of parties and pressure groups and the conduct of elections.

647. Problems of Western Pacific. Three credit hours. Spring Quarter. Prerequisite, Political Science 402. Mr. Gilpatrick.

A study of the outstanding contemporary problems in the Pacific area, especially Soviet

Asia, Japan, China, Southeastern Asia and the antipodes. Military and naval aspects of the Pacific; post-war political, social and economic resettlement. Clash of races and cultures. Pacific organization.

649. International Relations of the Far East. Five credit hours. Winter Quarter. Prerequisite, Political Science 402. Mr. Gilpatrick.

Early impact of the Occident upon the Far East; relations between Russia, Japan and China; opening of the Far East in the Nineteenth Century; periods of wars and unsettlement; international rivalries in China. The Open Door Policy; the Russo-Japanese War; the Chinese Revolution; the effects of World War I and the Russian Revolution; Japanese imperialism. World War II and its aftermath.

650. The Governments and Politics of the Far East. Five credit hours. Autumn Quarter. Prerequisite, Political Science 401 and 402. Mr. Gilpatrick.

The imperial system of China and the experiment with the Republic; constitutionalism vs. militarism in Japan, the contiguous governments of eastern Asia; Korea, Manchukuo, Siberia, Mongolia.

701. Minor Problems. One to five credit hours. Autumn, Winter, and Spring Quarters. Informal conference, the intent being to allow full scope to the initiative of the student. Prerequisite, senior standing and forty hours of credit in the social sciences including fifteen hours in political science. Departmental Staff.

A special topic is assigned to each student and results are tested by theses and special examinations.

705-706-707. Honors Courses. Three to five credit hours. Autumn, Winter, and Spring Quarters. Informal conferences, the intent being to allow full scope to the initiative of the student. Prerequisite, senior standing and forty hours of credit in the social sciences, including fifteen hours in political science, with the record of "A" in at least half of the Political Science courses and an average of "B" in the remainder. At least two Quarters are required of candidates for the degree of Bachelor of Arts with Distinction in Political Science. Department staff.

A special topic is assigned to each student each Quarter, and results are tested by the requirement of theses and special examinations. Failure to receive a grade of "B" in this course is a disqualification for special honors.

731. Methods of Governmental Research. Three credit hours. Autumn Quarter. Prerequisite, fifteen hours in political science. Mr. Walker.

The materials of political science; history of procedure in political science research; research technique; presentation of results of research.

Not open to students who have credit for Political Science 631.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PORTUGUESE

(See Romance Languages and Literatures)

PRACTICAL ARTS AND VOCATIONAL EDUCATION

(See Education)

PRINCIPLES AND PRACTICE OF EDUCATION

(See Education)

PSYCHOLOGY

Office, 325 Arps Hall

PROFESSORS BURTT, GODDARD (EMERITUS), WILLIAMS (EMERITUS), PRESSEY, TOOPS, DOCKERAY, RENSCHAW, ENGLISH, SHARTLE, ROBINSON, EDGERTON, DUREA, KELLY, AND MELTON, ASSOCIATE PROFESSORS ROGERS, STOGDILL, WICKENS, AND RAIMY, ASSISTANT PROFESSORS HORROCKS, KINZER, ROTTER, AND FLETCHER, INSTRUCTORS AND ASSISTANTS

The department offers instructional and training facilities in practically all divisions of Psychology. For administrative purposes and for the general guidance of the student these have been grouped into a number of areas but there is great flexibility in the working out of a unified program of study. The following areas and approximate sequences of courses are suggested for preliminary guidance but students contemplating a program emphasizing psychology are urged to consult with the department as early as possible. This is particularly the case with graduate students. Thus in planning for a Doctor's degree a reading knowledge of French and German should be acquired during the undergraduate period.

I. General, Experimental, and Comparative Psychology: 401-402, 521, 601-602-603, 605, 606, 607, 608, 626, 629, 630, 645, 646, 647, 650, 655, 656, 825.

II. Educational Psychology—preparation for psychological service to the schools: 401 and 407 (both required in the College of Education), 402, 510, 608, 618, 615, 618., 611, 628, 631, 640, 652, 663, 664, 676, 650, 681, 803.

III. Abnormal and Clinical Psychology: 401-402 or 407, 408, 608, 609, 611, 613, 618, 619, 521, 622, 631, 541, 642, 650, 678, 806, 808, 817, 820.

In this division will be found courses serving the following purposes:

- (1) Extending the student's knowledge of another field of psychology.
- (2) Acquainting him with an understanding of the possible derangements or disturbances of mental functions, and the means for correcting these in himself or in others.
- (3) Fitting the student for service in one of the rapidly developing fields of mental hygiene as psycho-clinician, teacher, or director of clinics.

IV. Industrial Psychology: 401-402, 635, 608, 639, 637, 601, 618, 613, 644, 640, 642, 626, 639, 685, 650 814.

V. Personnel and Counseling: 401 402, 608, 637, 639, 640, 659, 681, 685, 689, 814.

PSYCHO-EDUCATIONAL SERVICE. The Department offers a consultation service to University students. Direct contact may be made with the following members of the staff: Academic orientation, study problems, reading difficulties—Mr. Robinson, 320 Arps Hall, Mr. Kinzer, 400 Arps Hall; Vocational orientation or choice—Mr. Edgerton, 412 Arps Hall, Mr. Fletcher, Armory; Social and personal orientation—Mrs. Stogdill, 300 Arps Hall, Mr. Kelly, Mr. Rotter, 304 Arps Hall, Mr. Durea, Mr. Raimy, 312 Arps Hall.

401. General Psychology. Five credit hours. One Quarter. Autumn, Winter, Spring. Five meetings each week. Lectures, discussions, laboratory exercises, and reports. All instructors.

An introductory course and fundamental to all subsequent courses in the department. This course, together with Psychology 402, undertakes to present a survey of the whole field of human psychology. This includes a study of the experimental findings in infant behavior and the subsequent development of adult modes of response, such as emotion, attention, habit, thinking, and the nature and development of personality.

The facts and principles of human behavior pertinent to everyday life are stressed. The student is required to develop skill in the practical applications of experimental findings in the fields of infant behavior, motivation, attention, and emotion.

402. General Psychology. Five credit hours. One Quarter. Autumn, Winter, Spring. Five meetings each week. Lectures, discussions, laboratory exercises, and reports. All instructors.

A continuation of Psychology 401. Further emphasis on the development of a scientific attitude toward personal psychological problems in the fields of learning, thinking, intelligence, and personality.

403. General Psychology for Students in the College of Arts. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Zoology 401-402 or Botany 401-402. All instructors.

A general course designed to round out the Biological Science sequence in the College of Arts.

407. Educational Psychology. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lecture hours each week. Lectures, discussions, laboratory exercises, and reports. Prerequisite, Psychology 401. All instructors.

The course begins with a brief study of the capacities, abilities, and interests of children,

individual differences, and total development through the school years. It then proceeds to a study of learning and the results of investigations regarding the progress of learning in school. Throughout the course experimental data are stressed and practical problems emphasized, with frequent laboratory exercises.

Required in the College of Education.

408. Mental Hygiene. Three credit hours. One Quarter. Autumn, Winter, Spring. Three class meetings each week. Not open to Seniors. Prerequisite, Psychology 401. Mrs. Stogdill, Mr. Durea, Miss Price.

A general survey of the principles of mental hygiene. A study of social and emotional adjustment, and personality in light of the principles of mental hygiene. Adjustment problems of the college student.

409. Introduction to Applied Psychology. Three credit hours. Spring Quarter. Three lecture hours each week. Prerequisite, Psychology 401. Mr. Burt.

A systematic discussion of problems, methods, and typical results of psychology in the practical fields of medicine, law, education and business.

411. Psychology of Effective Study and Individual Adjustment. Three credit hours. One Quarter. Autumn, Winter, Spring. Lectures, readings, reports, individual conferences. Mr. Robinson, Mr. Kinzer.

The course will give attention to student problems of two kinds. The psychological principles of effective learning will be not only taught but demonstrated and applied under the supervision of the instructor. Students who feel themselves handicapped by poor habits of study are urged to enroll in this course.

The psychological problems involved in the transition from control by adults to self-management will be considered. The resources of clinical psychology will be made available for the solution of difficulties of individual adjustment.

For further details see the Junior Dean or the Secretary of the College.

501. Psychological Problems in Engineering. Three credit hours. Spring Quarter. Three lecture hours each week. Open only to Juniors and Seniors in the College of Engineering. Mr. Burt.

Selection and motivation of employees; psychology in industrial efficiency and in selling; handling men; the human factor in engineering.

504-505-506. General Psychology. Three credit hours each Quarter. Autumn, Winter, Spring, or Winter, Spring, Autumn. Not open to Freshmen or Sophomores. The three portions must be taken in sequence. Prerequisite Psychology 401 or 403. Required of Psychology majors in the College of Arts. Mr. Melton, Mr. Renshaw, Mr. Dockeray, and others.

This course deals with the subject matter and methods of psychology as a life science. Topics include the metric methods and problems of intensity, the sensory discrimination functions, perception, learning, the acquisition of skill, memory, reasoning, abstraction and generalization, feeling and emotion, the self, abilities and individual differences, technology.

The laboratory course 601, 602, and 603 may be taken concurrently.

507. Genetic Psychology. Five credit hours. Winter Quarter. Five lecture hours each week. Lectures, recitations, and reports. Required of undergraduate majors in Psychology for the College of Arts. Prerequisite, Psychology 401 or 403. Mr. Horrocks, Mr. Pressey.

This course is designed to present the facts of human development with some phylogenetic perspective. Topics considered are: physical development, particularly with reference to the development of the nervous system; inheritance of mental traits; innate tendencies, their characteristics, description, and modification; play; mental states, their physiological basis and development with growth and training; moral and religious development; development of personality.

Not open to students who have credit for Psychology 607.

508. Quantitative Methods in Psychology. Five credit hours. Autumn Quarter. Prerequisite, Psychology 401 or 403. Required of Psychology majors in the College of Arts. Mr. Edgerton and others.

Methods of measurement in psychology, procedures used in expressing behavior in terms of quantity, the significance of quantity in the study of human traits.

510. Adolescence. Three credit hours. One Quarter. Autumn and Winter. Three lectures each week. Prerequisite, Psychology 407 or 402. Mr. English, Mr. Pressey, Mr. Robinson, Mr. Horrocks.

A study of the outstanding characteristics of the adolescent boy or girl, the educational and social problems arising at this period, and means for dealing with these problems.

Not open to students who have credit for Psychology 610.

521. Social Psychology. Three credit hours. One Quarter. Autumn and Spring. Three lecture hours each week. Required of undergraduate majors in the College of Arts. Prerequisite, Psychology 401 or 403. Mr. English, Mr. Wickens, and others.

The nature of the social environment and the psychological structure of the social forces operating on the individual. Psychological description of the factors involved in the development of the social aspects of personality and the individuals sensitivity to the social environment. Description and evaluation of the methods of measurement and techniques of investigation of the social psychologist.

Not open to students who have credit for Psychology 621.

531. Psychological Techniques of Flight Instructing. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Psychology 401.

A presentation of the psychological principles of perception, motivation and acquisition of skill as they apply to the aircraft pilot. This includes methods of creating interest, the avoidance of tension, the influence of praise and reproof, and the importance of different methods of presenting descriptions of maneuvers.

Not open to students who have credit for Flight Training 531.

541. Psychology of Abnormal Behavior. Three credit hours. Winter Quarter. Three lecture periods each week. Observation clinics at Columbus State Hospital. Prerequisite, ten hours of psychology. Required of undergraduate majors in the College of Arts. Mr. Durea.

Consideration will be given to the following topics: historical purview of abnormal behavior; criteria of normal and abnormal behavior; symptomatology; etiology of abnormal states; disturbing forces in personality; nosological formulations; therapy. Throughout the course emphasis will be on dynamic factors rather than description.

Not open to students who have credit for Psychology 641.

581. Projects in Dormitory Counselling. One to four credit hours. Autumn, Winter, and Spring Quarters. May be repeated until a total of four credit hours is obtained. Prerequisite, Psychology 402 or 407 and the consent of the instructor. Mrs. Conaway, Miss Hopwood.

This course is for mature student assistants of Freshmen in the dormitories and in other organized residences for women. Under the supervision of the Dean of Women, students will have actual experience in (a) advising younger students in the same house concerning their scholastic and social orientation; and (b) in the use and interpretation of records and scholarship as bearing on personal development. The psychological principles basic to such understanding and interpretation will be presented in lectures, discussions, and readings.

This course will be accepted as a professional elective in the College of Education.

Not open to students who have credit for Education Survey 665.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

601. Experimental Psychology. Three to five credit hours. Autumn Quarter. One lecture and two or more laboratory periods each week. Prerequisite, Psychology 402. Mr. Renshaw.

The laboratory course in experimental psychology for advanced undergraduate and graduate students. The experiments are selected both for general cultural values and for preparation for technical research in experimental psychology.

Psychology 601, 602, 603, comprise a unit year's work. Students may enter any Quarter.

602. Experimental Psychology. Three to five credit hours. Winter Quarter. One lecture and two or more laboratory periods each week. Mr. Renshaw.

603. Experimental Psychology. Three to five credit hours. Spring Quarter. One lecture and two or more laboratory periods each week. Mr. Renshaw.

605. Physiological Psychology. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 401-402. Mr. Dockeray.

A study of the physiological basis of psychological phenomena. The sensory processes, set, learning and inhibition will be special topics for treatment. Psychosomatic abnormalities will be considered.

606. Advanced Physiological Psychology. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Psychology 401-402. Mr. Dockeray.

The physiological processes involved in attention, emotion, fatigue, and sleep. Recent studies of muscle potentials and brain waves as they relate to psychological problems will be emphasized.

608. Educational Statistics: Elementary. Four credit hours. Autumn Quarter. Two lectures and two two-hour laboratory periods each week. Mr. Toops, Mr. Edgerton.

A basic statistical course for students intending to conduct major or minor research. Frequency distributions, measures of central tendency and variability; construction of graphs and charts; interpretation of results in terms of probability; simple treatment of correlation. Extended practice in the use of calculating machines and computational devices.

609. Exceptional Children: General Survey. Three credit hours. Autumn Quarter. Three lecture hours each week. Lectures, reports, clinics, and visits to public institutions. Prerequisite, ten hours of psychology. Mr. Raimy.

The social and pedagogical significance of individual differences among children with respect to mental, physical, and social traits and their interrelations. Superior and subnormal children, those with special abilities and disabilities, the blind, the deaf and hard of hearing, the defective in speech, and those who present personality and behavior problems.

611. The Intellectual Deviate. Three credit hours. Spring Quarter. Two lecture hours and one conference hour each week. Lectures, reports, clinics, visits to institutions and schools. Prerequisite, Psychology 609 or permission of the instructor. Mr. Raimy.

A study of the different types of children whose intellectual capacities require special understanding and treatment by parents, teachers, social workers, psychologists, and others. Particular attention given to the slow learning child and to the intellectually gifted child.

613. Mental and Educational Tests. Three credit hours. Autumn Quarter. Two lectures and one conference and laboratory hour each week. Lectures, readings, classroom demonstrations, and special reports. Prerequisite, Psychology 402 or 407. Mr. Horrocks.

A broad basic course for teachers, and for students of psychology, clinical work, and sociology. The course will begin with a discussion of tests in school subjects, will then take up tests of general and special ability and "non-intellectual" traits, and will conclude with a general discussion of the construction of tests and their use in dealing with various practical and research problems.

615. Psycho-Educational Diagnosis and Treatment. Three credit hours. All Quarters. One lecture and four laboratory hours each week. May be taken for one to three Quarters with a maximum credit of nine hours. Prerequisite, Psychology 683 and permission of the instructor. Mr. Robinson, Miss Rosebrook.

Practice in the giving and scoring of tests; clinical use of test materials in the diagnosis of special disabilities and difficulties in school work; clinical practice with remedial procedures.

618. Clinical Tests. Four credit hours. One Quarter. Autumn, Winter, Spring. Two laboratory periods each week. Laboratory demonstrations and individual testing. Prerequisite, fifteen hours of psychology, or ten hours of psychology and five hours of professional educational subjects or sociology. (It is recommended that Psychology 695 be taken prior to this course). Permission of the instructor also is required. Mr. Kelly, Mr. Durea, and assistants.

Study and practice with individual mental tests as used in psychological clinics. To include Binet, performance and personality tests.

619. Psychological Clinic. Two or four credit hours. One Quarter. Autumn, Winter, Spring. One four-hour laboratory period each week. Clinic

practicum. May be taken for one or two Quarters with a maximum credit of four hours. Prerequisite, Psychology 618 and permission of the instructor. Mr. Raimy.

Practical work in the examination and study of psychological problems. Cases will be studied in schools, institutions and in the psychological clinic.

NOTE: Because of demand for psychological service by parents, schools, and a variety of social and welfare agencies the psychological clinic operates throughout the year. A student may profitably receive the special training which this course gives for a second Quarter. Repetition does not involve repetition of content but additional practice in clinical procedure.

622. Delinquent Children. Three credit hours. Winter Quarter. Three lecture hours each week. Lectures, reports, and visits to the Bureau of Juvenile Research. Prerequisite, thirteen hours of psychology. If this does not include Psychology 609, permission of the instructor must be obtained. Mr. Durea.

The meaning and significance of delinquency: its psychological basis; causes and prevention. The home and school as factors determining delinquent behavior. The significance of psychological findings for juvenile court procedure. The present-day methods of dealing with the problem. The psychology of social conformity versus non-conformity, i.e., misconduct, whether technically delinquent or not.

624. Perception. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Psychology 401-402. Mr. Renshaw.

The theories and experimental literature dealing with the perception of space, form, size, position, motion, brightness, hue, in vision and the problems in the cutaneous, auditory, olfactory, and gustatory modalities.

626. Psychology of Learning. Five credit hours. Autumn Quarter. Five lecture and discussion hours each week. Prerequisite, Psychology 402 or its equivalent. Mr. Melton.

The principles that underlie the discovery, fixation, and retention of new modes of human behavior. Emphasis is placed on theoretical formulation of the necessary conditions of learning and forgetting.

628. Principles and Economy of Learning. Three credit hours. Winter Quarter. Three lectures each week. Lectures, readings in monographs and journals, discussions. Prerequisite, permission of the instructor and sixteen hours of psychology or graduate standing. Mr. English.

The control of learning activities; memory and forgetting; transfer of training, generalization and thinking in relation to memory; the more elaborate types of learning such as are seen in school work. Special attention will be paid to recent experimentation and theories.

629. Advanced Systematic Psychology. Five credit hours. Autumn Quarter. Five lectures each week. Prerequisite, Psychology 401-402. Miss Rogers.

The purpose of this course is to give a larger background to the advanced student of psychology, with respect to other disciplines, especially the sciences, leading to a systematic development of the more complex experiences.

630. Psychology of Feeling and Emotion. Five credit hours. Spring Quarter. Five lectures each week. Prerequisite, Psychology 401-402. Miss Rogers.

A study of the various theories of feeling and emotion and the fundamental relations of emotion to other experiences, personality and adjustments. Emotions in relation to various psychological activities. Methods of investigating emotion.

***631. Nature and Appraisal of Individual Differences.** Three credit hours. Spring Quarter. Three lecture hours each week. Prerequisite, fifteen hours of psychology or ten hours of psychology and five hours of professional educational subjects. Mr. English.

Critical consideration of common ideas about ability and other traits. Historical development of measurement of individual differences. Resulting theories of intelligence, special abilities, and other traits. Relation of measurement of individual differences to systematic psychology.

* Not given in 1947-1948.

634. Criminal and Legal Psychology. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, ten hours of psychology. Mr. Burt.

Psychological factors in the determination of reliability of testimony; the technique of detecting crime and falsehood; responsibility; the relation of crime to mental disease or defect; the prevention of crime through environmental factors and heredity.

635. Psychology of Advertising. Three credit hours. One Quarter. Autumn and Spring. Three lectures each week. Prerequisite, ten hours of psychology. Mr. Burt.

The psychological principles involved in effective advertising, notably attention, memory and action, with the contributory factors of association, feeling, instinct, suggestion, and reasoning.

637. Industrial Psychology. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, ten hours of psychology. Mr. Burt.

The application of psychology to problems of industrial learning, adjustment of technical to mental factors, monotony, fatigue, environmental conditions, industrial unrest, morale, and accidents.

638. Industrial and Vocational Psychology Laboratory. Three credit hours. Spring Quarter. Two three-hour laboratory periods each week. Prerequisite, permission of the instructor. Mr. Burt.

Laboratory work in the application of psychology to industrial and vocational problems, with especial emphasis on the development of psychological techniques for hiring employees. Practice in the devising and standardizing of occupational tests; obtaining and evaluating production ratings; correlation of ratings and tests; interpretation of results from the standpoint of vocational selection or guidance.

639. Psychology and Personnel. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, ten hours of psychology. Mr. Burt.

The application of psychology to problems of personnel. Selection and placement of employees by tests of intelligence and special ability. Trade tests, job analysis, and rating scales.

640. Educational and Vocational Guidance. Three credit hours. Winter Quarter. Prerequisite, Psychology 401-402 or 407. Mr. Toops.

A course dealing with the technique of evaluating psychological and related factors as a basis for making educational and vocational recommendations to individuals. The place of vocational and educational tests, previous record, and personality traits in determination of choice of occupation or course of study.

***643. Abnormal Psychology.** Two credit hours. Spring Quarter.

Lectures and case reports on abnormal reactions likely to be encountered in medical practice. Origin and development of neurotic symptoms, hysterics, mental conflict, anxiety states and other psychological phenomena of an abnormal nature. Methods of dealing with these reactions.

Elective in the College of Medicine.

644. The Techniques of Human Motivation. Three credit hours. Spring Quarter. Three hours each week. Lectures, recitations, and assigned readings. Prerequisite, ten hours of psychology. Mr. Toops.

The psychological bases of initiation and improvement of work. The role of instinct, habit, custom and tradition, rationalization and psychopathy in motivation. The incentive values of self-ratings, competition, punishment, and such rewards as money, bonuses, participation and promotion, in relation to the capacities of individuals.

645. History of Psychology. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, sixteen hours in psychology. Mr. Kinzer.

The course aims to view modern psychological problems in the light of their historical antecedents. The development of various theories such as those of sensation, attention, space perception, and emotion will be traced from earliest times to the present. As far as possible assignments will involve reference to original sources.

646. Contemporary Viewpoints in Psychology. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, Psychology 401-402 or 407. Mr. Dockeray.

A consideration of the contributions of various schools beginning with structuralists, functionalists, and behaviorists. Special attention will be given to the points of view of leading psychologists of the present. Such concepts as Gestalt, topology and operational definitions will be especially considered.

* Not given in 1947-1948.

647. Theoretical Psychology. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, Psychology 401-402 or 407. Mr. Dockeray.

An attempt at an organization of the data of psychology into a consistent system. Students will be given an opportunity to express their preferences in the development of their own systematic points of view.

650. Minor Problems. One or more credit hours. All Quarters. Prerequisite, sixteen hours in psychology and the permission of the instructor. All instructors.

Investigation of minor problems in the various fields of psychology.

By permission of the chairman of the department and the Director of the Bureau of Educational Research, students enrolled in this course may obtain credit for research work done under the auspices of the Bureau staff.

655. Comparative Psychology. Five credit hours. Winter Quarter. Five lectures each week. Prerequisite, Psychology 401-402. Mr. Wickens.

The principles of animal behavior in relation to human behavior. A study of the similarities and differences in the behavior of animals and of humans and the explanation of these similarities and differences, with special reference to those principles definitely involved in the organism's mode of adjusting to its environment.

***656. Comparative Psychology.** Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, Psychology 655. Mr. Dockeray.

A continuation of Psychology 655, devoted largely to contemporary literature in comparative psychology.

***659. University Personnel Psychology.** Three credit hours. Autumn Quarter. Two lectures and one two-hour laboratory period each week. Given in alternate years. Prerequisite, ten hours of psychology. Mr. Toops.

A course designed for students who are preparing for positions in vocational guidance or personnel work in universities and those interested in the achievement of adults. The giving, scoring, and interpretation of tests of university entrants. Reading tests and tests of special capacities of adults. Planning a testing program for adults. Theories of adult testing. Comparative study of University personnel programs and procedures. The content of the course will vary somewhat from year to year.

663. Child Psychology. Four credit hours. Autumn Quarter. Four class meetings each week. Required of students specializing in elementary education. This course cannot be counted as professional work unless Psychology 664 is also taken. Prerequisite, Psychology 407. Mr. English, Mr. Pressey.

The psychological development of the child from three to twelve years. Effects of the school and out-of-school activities on development. Analysis of significant psychological problems involved in curricular activities. Provision by school and other social agencies for the psychological needs of the child.

664. Observation of the Elementary School Child. One or two credit hours. One credit hour for graduate students. One Quarter. Autumn, Winter, Spring. Prerequisite, Psychology 663. If taken in any Quarter other than the one following that in which Psychology 663 is taken, special permission of the instructor must be obtained in advance. One credit hour required of students pursuing the curriculum in Elementary Education. Mr. English, Mr. Pressey, Mr. Robinson.

Observation of a particular individual child at least one hour weekly over a twenty-week period. Preparation of a detailed report of observations, together with an evaluation of test results, school records, physical and mental examinations and case-history records of this individual.

NOTE: The observations should normally begin about the middle of the Quarter during which Psychology 663 is being taken and be continued to the end of the following Quarter. Only in highly special cases can the observations be condensed into less than twenty weeks as the essential objective is a long-continued acquaintance with a developing child.

665. The Psychology of Character Formation. Three credit hours. Autumn Quarter. Three meetings each week. Prerequisite, ten hours in psychology. Mr. English.

Psychological analyses of character, in which are brought out the relation of character to its biological bases and its distinction from personality. Major attention is given to recent experimental studies of morale and of attitudes as factors in character, of the measurement of character and of the effect of varying environmental influences on character.

* Not given in 1947-1948.

667. Psychology of Music. Three credit hours. Winter Quarter. Two lectures and one two-hour laboratory period each week. Prerequisite, Psychology 407 and Music 468 or 661, or consent of the instructor. Mr. M. E. Wilson.

The contribution of rhythm, harmony, tone color, form, familiarity, voice and tactual association to the emotional experience in music. Analysis and measurement of musical talent. Psychological factors in musical interpretation and in the teaching of music.

668. Principles of Gestalt Psychology. Three credit hours. Autumn Quarter. Three lectures each week. Prerequisite, Psychology 402 or 407. Mr. Renshaw.

A survey of the experimental work which supplied the data for the Gestaltist. A study of the basic dynamic principles which constitute the Gestalt system. Application of these principles to perception, learning, thinking, and emotion.

670. Psychological Problems of Adult Life. Three credit hours. Winter Quarter. Mr. Pressey.

A survey of the important recent psychological literature on changes in capacity for learning through the adult years and into old age, changes in incentives and interests throughout these years, emotional development and orientation of adults, psychological problems of work adjustment, adult and parent education, leisure.

Not open to students who have credit for Psychology 825.

671. Principles of Treating the Problem Child. Three credit hours. Winter Quarter. Three lecture hours each week with lectures, recitations, reports. Prerequisite, thirteen hours of psychology. If this does not include Psychology 609, permission of the instructor must be obtained. Mr. Rotter.

For prospective teachers, counselors and clinicians. A survey of treatment procedures and resources. Methods used in dealing with behavior and personality problems. The flexible use of school environment and community resources, methods of altering attitudes of parent and child, and direct treatment approaches.

672. Psychological Aspects of Biography. Three credit hours. Spring Quarter. One two-hour meeting and one conference hour each week. Prerequisite, Psychology 402 or 407. Mr. Pressey.

The course will make use of the very rich biographical and autobiographical material now available in an effort to understand developmental trends throughout the life-span and with special reference to the adult years and the older ages.

674. Problems of the Dean of Women. One or more credit hours. Autumn, Winter and Spring Quarters. Prerequisite, Psychology 581 or its equivalent, and the approval of the instructor. Mrs. Conaway.

Investigation of the minor psychological problems which arise in connection with the social, scholastic, and vocational adjustments of undergraduates women.

Not open for graduate credit.

676. Advanced Educational Psychology. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, Psychology 402 or 407 or permission of the instructor. Mr. Kinzer.

A course in advanced educational psychology, giving a critical appraisal of the implications for education of modern psychological findings.

678. Psychology of Personality. Three credit hours. Spring Quarter. Three lectures each week. Prerequisite, ten hours of psychology. Mr. Durea.

This course will consider the individual both as a social and biological unit, relating each group of factors to the development of personality. Ample attention will be given to questions such as integration, measurement of traits, personality types, faulty schemes of character analysis: effect of glands of internal secretion; self-analysis. This course is correlative to Psychology 641.

679. Psychology of Public Attitudes. Three credit hours. Winter Quarter. Three lectures each week. Prerequisite, ten hours of psychology.

The influence of imitation, suggestion, transfer of emotions, postural set, and defense mechanisms on public attitudes. Psychological factors in leadership and morale. Special emphasis on the experimental approach and such techniques as scaling attitudes and factor analysis.

680. Educational Tests and Measurements. Three credit hours. Spring Quarter. Three lectures each week. Assigned readings and reports. Open to

seniors and graduate students of experience with permission of the instructor in charge. Mr. Heck, Mr. Pressey.

A service course for those majoring in Elementary and Secondary Education and School Administration. The course will consider selection of tests and organization of testing programs for elementary and secondary schools; the use of tests in classification, diagnosis, prognosis, and educational guidance; the principles of teacher-made tests; and effect of testing on marking systems.

681. Psychology of Remedial Counseling. Three to five credit hours; this course may be repeated until ten hours have been earned. One Quarter. Autumn, Winter, Spring. Two lectures and three to five laboratory hours each week. Prerequisite, thirteen hours of psychology and permission of the instructor. Enrollment is limited by extent of laboratory facilities. Mr. Robinson.

Psychological principles involved in aiding students in high school and college in their adjustment to curricular and extra-curricular activities. This includes methods of psycho-educational diagnosis, principles of effective learning, and remedial reading instruction. Laboratory practice is obtained by assisting beginning college students with such problems.

NOTE: It is suggested that students may find considerable profit in repeating the course. Such repetition represents additional experience and meeting a greater variety of problems.

683. Psychology of Reading. Three credit hours. Autumn Quarter. Three lecture and discussion hours each week. Prerequisite, Psychology 402 or 407. Mr. Robinson.

Psychological analysis of the reading process. The relationship of this to teaching and remedial methods. Discussion of remedial reading techniques.

685. Educational and Vocational Guidance Laboratory. Three to five credit hours. Autumn, Winter, and Spring Quarters. This course may be repeated until ten hours have been earned. Two hour lecture, discussion and demonstration period and three to six hours of practical experience each week in counseling and related activities. Prerequisite, Psychology 689 and permission of the instructor. Mr. Edgerton, Mr. Fletcher.

An opportunity for mature students who have adequate background to obtain practical experience in guidance and counseling. Practice in counseling with both in-school and out-of-school youth, with parents, employers, and social agencies. At present the counseling is done through the facilities of the Occupational Opportunities Service. It may also use the facilities of the United States Employment Service.

NOTE: It is suggested that students may find considerable profit in repeating the course. Such repetition represents additional experience and meeting a greater variety of problems.

***687. Psychological Optics.** Five credit hours. Spring Quarter. Lectures, laboratory demonstrations, and practice. Prerequisite, Psychology 401 and 402.

Psychological problems confronting the optometrist in the following fields: adjustment to correction, psychological visual anomalies, visual problems in reading disabilities, and clinician-and-patient relationship.

Not open for graduate credit.

***688. Laboratory in Employment Techniques.** Four or five credit hours. One Quarter. Winter and Spring. Two lecture hours and four to six laboratory hours each week. Prerequisite, Psychology 689 and permission of the instructor. Mr. Shartle, Mr. Edgerton.

Employment interviewing and occupational classification, including use of Dictionary of Occupations; description and interpretation of work samples and psychological tests; actual supervised practice in employment interviewing, classification, placement employer calls, and administration of work samples and tests in the Ohio State Employment Service.

689. Occupational Information. Three credit hours. One Quarter. Autumn, Winter, Spring. Two two-hour meetings each week. Lectures, discussions, field trips. Prerequisite, senior standing and permission of the instructor. Mr. Shartle.

A survey of occupations and occupational information for guidance counselors and employment interviewers; study of the literature on occupations and occupational information; writing of occupational analyses; field trips to places of employment to observe workers at work; finding filing and use of occupational information for employment and guidance purposes.

* Not given in 1947-1948.

690. Mental Hygiene for Professional Workers. Three credit hours. Spring Quarter. Prerequisite, Psychology 402 or 407. Mr. Durea, Mrs. Stogdill.

The conditions under which the individual makes the optimum social adjustment; standards of social adjustment in groups; the pre-determinants of maladjustment and prevention of maladjustment. For teachers, personnel and guidance workers, social workers, psychologists, occupational therapists, and other professional groups.

Not open to students who have credit for two or more of the following courses: Psychology 610, 663, 670, 678, 808.

693. Use of Tabulating Machine Techniques in Research. Two credit hours. Winter Quarter. One lecture and one laboratory period each week. Prerequisite, Psychology 608, Economics 522, or an equivalent course in statistics, or permission of the instructor. Mr. Toops.

Methods of large-scale researches involving tabulating machines and other specialized technical devices. Coding of data; operation of sorting and tabulating machines.

695. Clinical Psychology. Three credit hours. Autumn Quarter. Three lecture hours each week. Prerequisite, ten hours of psychology. Mr. Durea.

Discussion of the field of clinical psychology; its methods, its problems and its use in guidance, education, hospitals, industry, and other areas.

703. Special Topics in Psychology. Three credit hours. Autumn and Winter Quarters. Lectures and discussions. Prerequisite, fifteen Quarter-hours of psychology courses in the "600" group or above and permission of the instructor. May not be elected more than twice. All professors.

The topics will vary from Quarter to Quarter and will be announced at least one month in advance. The following are typical of the topics contemplated in the near future: factor analysis, technique of constructing personnel forms, techniques of the remedial interview, contribution of experimental neuroses to abnormal psychology, psychology of senility.

704. Tests and Measurements in Speech Education. Three credit hours. Spring Quarter. Prerequisites, Psychology 632 and Psychology 613. Mr. Knower.

Problems involved in securing and using available and suitable tests and testing procedures in speech. Diagnosis and evaluation. Rating and rater training. Building general and specialized speech tests. Administration and scoring of speech tests. Interpreting test data in this field.

718. The Psychology of Group Psychotherapy. Two credit hours. One Quarter. Autumn and Spring. Two class hours per week. If Psychology 671 has not been taken, permission of the instructor must be obtained. Mr. Rotter.

Primarily for students who may use psychological group methods in professional work. General principles of group therapy and specific methods with children and adults described and evaluated.

742. Psychopathology. Five credit hours. Autumn Quarter. Four class hours each week and one additional conference hour. Lectures, discussions, reports. Prerequisite, twenty hours of psychology or permission of the instructor. Mr. Durea.

Dynamic basis of behavior disorders both major and minor. Critical attention to the problem of psychosomatic. Consideration of the experimental work with psychoses and psychoneuroses. Contributions which experimental work has made to abnormal behavior.

Not open to students who have credit for Psychology 642.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PUBLIC HEALTH AND HYGIENE (See Nursing)

RADIO BROADCASTING (See page 102)

RHETORIC AND ENGLISH LANGUAGE (See English)

ROMANCE LANGUAGES AND LITERATURES

Office, 111 Derby Hall

PROFESSORS HENDRIX, MOORE, HAVENS, ROCKWOOD, MONROE, ANIBAL, DEMOREST, AND SCHUTZ, ASSISTANT PROFESSORS ARMITAGE, MEIDEN AND ROZZELL, MR. CARLUT, MR. ROBERTSON, MR. PRICE, MISS WOOD, MR. NACCI, AND ASSISTANTS

The undergraduate courses offered in French and Spanish are divided into elementary (401-402-403), intermediate (404-410-417 and French 520), and advanced (all 600 courses) courses.

JUNIOR DIVISION—FRENCH AND SPANISH

(a) For those who enter with no previous French or Spanish, the following outline course is recommended in French or Spanish:

First Year: French or Spanish 401-402-403

Second Year: French or Spanish 404-410-417

(b) For those who enter with two years of high school French or Spanish, the following outline course is recommended (but see statement on Placement Tests below):

First Year: French or Spanish 403-404-410

Second Year: French or Spanish 417, French 520, a 600 course on the recommendation of the department.

(c) Those who enter with three years of high school French or Spanish (validated by the Placement Test) should first take French or Spanish 404, then French or Spanish 410; those who enter with four years of high school French or Spanish (validated by the Placement Test) should begin with French or Spanish 410. These courses should be followed by French or Spanish 417, French 520, and on the recommendation of the Department by French or Spanish 600 courses.

SENIOR DIVISION

The advanced undergraduate courses offered in French and Spanish fall into two general groups. Students may emphasize one or both of these lines of study.

FRENCH

(1) Literary French courses: 603-604, 616, 617, 618, 633, 634, 640, 650, 651.

(2) Linguistic French courses: 619, 628, 632, 635, 636, 638, 655.

SPANISH

(1) Literary Spanish courses: 607-608, 609-610, 611, 613, 614, 615, 616, 626, 630, 640, 641, 650, 651, 652, 660.

(2) Linguistic Spanish courses: 605, 606, 617, 620, 623.

A major in the Department of Romance Languages may consist of 40 to 60 hours of courses in the Senior Division, including French or Spanish 417, which are approved by the student's adviser. In special cases courses in related fields may be approved by the student's adviser.

PLACEMENT TESTS

Placement tests are required of all students who continue the study of French or Spanish in the University in courses 402, 403, or 404 after beginning such a study elsewhere. The purpose of the tests is to place each student in the highest course which he is able to carry with a fair chance of success. In the Autumn Quarter the Placement Tests are given for freshmen during Freshman Week, and for others during the first week or recitation. In other Quarters the Placement Tests are given during the first week of recitations for all new students continuing the study of a language in this department.

ADVANCED STANDING

Freshmen who have excess entrance credits in foreign language are eligible to examination for advanced standing in French or Spanish. This examination is given at the same time as the Placement Tests mentioned above.

THE FRENCH CLUB

The French Club is a student organization conducted by the department. Formal meetings are held fortnightly. It has been the practice of the French Club to stage one or more French plays annually for the last twenty-five years.

FRENCH TABLE

One or more times a week students meet at a French Table. Those interested should inquire at the department office.

THE SPANISH CLUB

The Spanish Club is a student organization conducted by the department. The Club presents one or two plays each year.

SPANISH TABLE

One or more times a week students meet at a Spanish Table. Those interested should inquire at the department office.

THE ITALIAN CLUB

The Italian Club is a student organization conducted by the Department under the supervision of Mr. Moore. It is the aim of the Club to present a play each year. Formal meetings are held fortnightly.

FRENCH

401. Elementary French. Five credit hours. One Quarter. Autumn, Winter, Spring. Sections in this course are limited to twenty-five students. All instructors.

The elements of French grammar with abundant oral and written exercises. Especial attention to ear training and oral practice.

This course may not be taken simultaneously with Spanish 401-402, Italian 401-402, or Portuguese 401-402, or by students who are not eligible to take English 401.

402. Elementary French (Continued). Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, French 401. Sections in this course are limited to twenty-five students. All instructors.

The elements of French grammar with abundant oral and written exercises. Especial attention to active vocabulary. Elementary reading based on French geography, history, customs and manners.

This course may not be taken simultaneously with Spanish 401-402, Italian 401-402, or Portuguese 401-402.

403. Intermediate French. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, French 402 or equivalent. Sections in this course are limited to twenty-five students. All instructors.

404. Intermediate French (Continued). Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, French 403 or equivalent. Sections in this course are limited to twenty-five students. All instructors.

410. Elementary French Conversation and Composition. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, French 404. This course is conducted in French. Sections are limited to twenty students.

417. Introduction to Modern French Literature. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, French 404.

Rapid reading and discussion of the French literary movements and masterpieces of the Nineteenth Century and their relation to Modern France.

Not open to students who have credit for French 413-414.

520. Intermediate French Conversation and Composition. Five credit hours. One Quarter. Winter and Spring. Prerequisite, French 410 or its equivalent.

Vocabulary building, practice in the connected speaking of French, conversation and composition dealing with themes chosen from the life and civilization of contemporary France.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Students intending to specialize in French are urged to elect the following courses: French 627 or 632, 628, Latin 627, Philosophy 601-602, 603, German 705, History 624-625, and Fine Arts 677.

603. The Romantic Period in French Literature, 1800-1850. Five credit hours. Autumn Quarter. Lectures, collateral reading and reports. Prerequisite,

French 417 or its equivalent. Given biennially, alternating with French 604. Mr. Demorest.

The development of Romanticism and rise of realism in the first half of the Nineteenth Century in the novel, poetry, and drama.

* 604. French Literary Currents, 1850-1914. Five credit hours. Autumn Quarter. Lectures, collateral reading, discussions, reports. Given biennially, alternating with French 603. Prerequisite, French 417 or its equivalent. Mr. Demorest.

Realism, naturalism, and the movements of reaction in the novel and drama. The Parnassians and the Symbolists in poetry. Modern French literary critics.

616. French Literature of the Renaissance. Five credit hours. Spring Quarter. Given biennially, alternating with French 617. Prerequisite French 417 or its equivalent. Mr. Moore.

Marot, Rabelais, the *Pléiade*, Montaigne.

* 617. French Classicism, 1600-1715. Five credit hours. Spring Quarter. Given biennially, alternating with French 616. Prerequisite, French 417. Mr. Rockwood.

The formation of the classic spirit. The perfection of dramatic form and the Seventeenth Century portrait of man. Selected works of Malherbe, Descartes, Pascal, La Bruyère, Boileau, Corneille, Molière, and Racine.

* 618. French Literature of the Enlightenment. Five credit hours. Winter Quarter. Given biennially, alternating with French 640. Mr. Havens.

A study of the ideas of the Eighteenth Century in their relation to modern times. Special emphasis on Montesquieu, Voltaire, Diderot, and Rousseau.

619. French Translating and Interpreting. Three credit hours. Winter Quarter. Prerequisite, French 410 and 520 or the equivalent with a grade not lower than "C." Mr. Havens.

Translating from French to English and from English to French. Practice in rapid oral and written interpretation. This course is helpful in preparing for military, diplomatic, or other special service where exact linguistic knowledge is needed.

* 627. French Pronunciation. Three credit hours. One Quarter. Autumn and Winter. Three meetings each week with laboratory practice. Required for Education 536. Prerequisite, six Quarters of collegiate French or the equivalent with a grade not less than "C," and permission of the instructor. The class is limited to twelve.

The formation of French sounds. Lectures, with exercises in the use of the symbols of the International Phonetic Association. A systematic study of the rules of French pronunciation. Careful drill in the reading of French. Designed for advanced students who expect to teach French.

Not open to students who have credit for French 632.

628. Modern French Syntax. Five credit hours. Autumn Quarter. Required for Education 536. Prerequisite, six Quarters of collegiate French or the equivalent, with a grade not less than "C," and junior standing or consent of the instructor. Mr. Meiden.

A careful study of French grammar, with composition to illustrate.

632. French Pronunciation and Diction. Five credit hours. Winter Quarter. Required for Education 536. Prerequisite, six Quarters of collegiate French or the equivalent, with a grade of not less than "C," and permission of the instructor. The class is limited to twelve. Mr. Rockwood.

The formation of French sounds. Lectures, with exercises in the use of the symbols of the International Phonetic Association. A systematic study of the rules of French pronunciation and diction. Careful drill in the reading of French. Designed for advanced students who expect to teach French.

Not open to students who have credit for French 627.

* Not given in 1947-1948.

***633. Modern French Drama.** Three credit hours. Lectures, collateral reading, and reports. Prerequisite, French 417 or equivalent.

The end of the Nineteenth and the early years of the Twentieth Centuries. The Théâtre Libre. Realism, Naturalism, comedy, and psychological drama. Becque, Bernstein, Brieux, Mirbeau, Courteline, Porto-Riche, Curel, and others.

***634. Contemporary French Drama.** Three credit hours. Lectures, collateral reading, and reports. Prerequisite, French 417 or equivalent. Mr. Havens.

Symbolistic, religious, realistic, and psychological drama. The "school of silence." Théâtres d'avant-garde. Comedy, Jean-Jacques Bernard, Claudel, Lenormand, Raynal, Sarment, Giraudoux, Jules Romains, and others.

***635. Cours de Civilisation Française.** Three credit hours. Winter Quarter. Prerequisite, the equivalent of six Quarters of French and permission of the instructor. The course is conducted in French. The class is limited to fifteen. Given in alternate years. Mr. Demorest.

A study of the major developments of French culture down to the Nineteenth Century. The course is designed to give the student greater facility in understanding, speaking, and writing French.

636. La Civilisation Française Moderne. Three credit hours. Spring Quarter. Prerequisite, French 410 and 417 or their equivalent. This course is conducted in French. Given in alternate years. Mr. Demorest.

The principal object of the course is to increase the student's facility in understanding, speaking, and writing French. The material for discussion is drawn from the life, institutions, and culture of Nineteenth and Twentieth Century France.

***638. Advanced Spoken and Written French.** Three credit hours. Prerequisite, French 410 and 520 or the equivalent with a grade not lower than "C." Mr. Havens.

Intensive practice in speaking and writing based on contemporary usage.

640. France in Contemporary Literature. Five credit hours. Winter Quarter. Lectures, collateral readings, and reports. Prerequisite, French 417 or equivalent. Mr. Demorest.

Recent developments in the novel, essay, and poetry, and their relationships with French life. Proust, Gide, Barbusse, Duhamel, Maurois, Romain, Morand, Malraux, Colette, Claudel, Valéry, and others. Regionalism, etc.

†650. Modern French Poetry. Three credit hours. Lectures, discussions and reports. Prerequisite, French 417, or equivalent. Mr. Demorest, Mr. Strauss.

The sources and processes of poetic creation as exemplified in selected works of the modern French poetic pathfinders.

†651. Contemporary French Poetry. Three credit hours. Lectures, discussions and reports. Prerequisite, French 417, or equivalent. Mr. Demorest, Mr. Strauss.

The aims and techniques of Twentieth Century French poetry, with special emphasis on the poetic experiments of the last twenty-five years.

†655. La France vue à travers le conte. Three credit hours. Prerequisite, French 410 and 520, or equivalent. This course is conducted in French. Mr. Demorest.

The course is designed to develop proficiency in speaking and writing French, and to provide materials drawn from outstanding authors, illustrating modern French traits and preoccupations.

660. French Literature from the Renaissance to the Revolution. Five credit hours. Winter Quarter. Lectures, collateral readings, and reports. Prerequisite, French 417 or its equivalent. Mr. Havens.

This course is intended for students not majoring in Romance Languages.

A survey of the main writers and tendencies of the Renaissance in France, of French Classicism, and of the eighteenth century Enlightenment, with special reference to inter-relations with English literature.

* Not given in 1947-1948.

† Not given during the academic year, 1947-1948.

705-706-707. Honors Courses in French. Three to ten credit hours. Autumn, Winter, and Spring Quarters. Work in conference, library, or phonetic laboratory. Prerequisite, senior standing, with the record of "A" in at least half of the French courses and an average of "B" in the remainder, and the approval of the department.

This course is intended to give undergraduates of special aptitude a greater opportunity to do independent study than is possible in the ordinary course.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education. Course 692.

ITALIAN

401. Elementary Italian. Five credit hours. Autumn Quarter. Sections in this course are limited to twenty-five students. Mr. Moore.

Elementary Italian Grammar.

This course may not be taken simultaneously with French 401-402, Spanish 401-402, or Portuguese 401-402, or by students who are not eligible to take English 401.

402. Elementary Italian (Continued). Five credit hours. Winter Quarter. Prerequisite, Italian 401. Mr. Moore.

Elementary Italian Grammar. Modern Italian prose.

This course may not be taken simultaneously with French 401-402, Spanish 401-402, or Portuguese 401-402.

***503. Modern Italian Literature, 1800-1850.** Five credit hours. Spring Quarter. Prerequisite, Italian 402. Given in alternate years. Mr. Moore.

Foscolo, Manzoni, Pellico, Leopardi.

Not open to students who have credit for Italian 601.

504. Modern Italian Literature, 1851-1900. Five credit hours. Spring Quarter. Given in alternate years. Prerequisite, Italian 402 or the equivalent. Given in alternate years. Mr. Moore.

Rovetta, Carducci, Giacosa, Fogazzaro.

Not open to students who have credit for Italian 602.

505. Modern Italian Literature, 1901—. Five credit hours. Autumn Quarter. Prerequisite, Italian 402. Mr. Moore.

Pirandello, D'Annunzio, Deladda.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

611. Dante's Life and Works. Three credit hours. Winter Quarter. Given in alternate years. Prerequisite, Italian 602 or the permission of the instructor. Mr. Moore.

Reading of the *Vita Nuova* and *The Inferno*, Cantos 1-16.

PORTUGUESE

401. Elementary Portuguese. Five credit hours. Autumn Quarter. Mr. Schutz.

This course may not be taken simultaneously with Spanish 401-402, French 401-402, or Italian 401-402, or by students who are not eligible to take English 401.

402. Elementary Portuguese (Continued). Five credit hours. Winter Quarter. Prerequisite, Portuguese 401. Mr. Schutz.

This course may not be taken simultaneously with Spanish 401-402, French 401-402, or Italian 401-402.

* Not given in 1947-1948.

403. Intermediate Portuguese. Five credit hours. Spring Quarter. Prerequisite, Portuguese 402 or equivalent. Mr. Schutz.

501. Portuguese Reading, Composition and Conversation. Five credit hours. Autumn Quarter. Prerequisite, Portuguese 403 or equivalent. Mr. Schutz.

Rapid reading of literary prose, with reports. Intensive reading of short stories, newspapers and periodicals. Free composition. Drill in pronunciation. The discussions carried on as far as feasible in Portuguese.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

604. Modern Brazilian Literature. Three credit hours. Winter Quarter. Prerequisite, Portuguese 501 or equivalent. Mr. Schutz.

Study of the more important figures of the Nineteenth Century and the contemporary period with emphasis on the latter.

608. Types of Portuguese Literature. Three credit hours. Spring Quarter. Prerequisite, Portuguese 501 or equivalent. Mr. Schutz.

A survey of Portuguese literature by genres. Attention will be given to Camoens, the romantic poets, Eça de Queiroz and others. The Portuguese influence on Brazil will be emphasized wherever possible.

SPANISH

401. Elementary Spanish. Five credit hours. One Quarter. Autumn, Winter, Spring. Sections in this course are limited to twenty-five students. All instructors.

The elements of Spanish grammar with abundant oral and written exercises. Especial attention to ear training and oral practice.

This course may not be taken simultaneously with French 401-402, Italian 401-402, or Portuguese 401-402, or by students who are not eligible to take English 401.

402. Elementary Spanish (Continued). Five credit hours. One Quarter. Autumn, Winter, Spring. Sections in this course are limited to twenty-five students. All instructors.

The elements of Spanish grammar with abundant oral and written exercises. Especial attention to active vocabulary. Elementary reading based on Spanish and Spanish-American geography, history, customs, and manners.

This course may not be taken simultaneously with French 401-402, Italian 401-402, or Portuguese 401-402.

403. Intermediate Spanish. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Spanish 402 or an equivalent. Sections in this course are limited to twenty-five students. All instructors.

404. Intermediate Spanish (Continued). Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Spanish 403 or an equivalent. Sections in this course are limited to twenty-five students. All instructors.

410. Elementary Spanish Conversation and Composition. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Spanish 404. This course is conducted in Spanish. Sections limited to twenty-five students.

417. Introduction to Modern Spanish Literature. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Spanish 404.

Rapid reading and discussion of the Spanish literary movements and masterpieces of the Nineteenth Century and their relation to Modern Spain and Spanish America.

Not open to students who have credit for Spanish 413-414.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

Students intending to specialize in Spanish are urged to elect the following courses outside of the department: Latin 627, Philosophy 601-602, 603, German 705, and History 645-646.

605. Advanced Composition and Conversation. Three credit hours. Autumn Quarter. Required for Education 536. Prerequisite, Spanish 410 and a "600" course in Spanish literature.

This course, conducted wholly in Spanish, is designed especially for prospective teachers and for persons desiring a practical command of the language. The subject matter will be for the most part the history and customs and manners of Spain.

606. Advanced Composition and Conversation (Continued). Three credit hours. Winter Quarter. Prerequisite, Spanish 605.

This course, conducted wholly in Spanish, is designed especially for prospective teachers and for persons desiring a practical command of the language. The subject matter will be for the most part the history and customs and manners of Spain.

***607. The Modern Spanish Novel.** Five credit hours. Autumn Quarter. Four meetings each week, a fifth at the option of the instructor. Given biennially, alternating with Spanish 609-610. Prerequisite, Spanish 417. Mr. Hendrix.

A careful study of the development of the modern Spanish novel, reading of representative authors. Lectures, collateral reading, and reports.

***608. The Modern Spanish Novel (Continued).** Five credit hours. Winter Quarter. Four meetings each week, a fifth at the option of the instructor. Given biennially, alternating with Spanish 609-610. Prerequisite, Spanish 417. Mr. Hendrix.

A careful study of the development of the modern Spanish novel, reading of representative authors. Lectures, collateral reading, and reports.

609. Romantic Drama and Poetry of the Nineteenth Century. Five credit hours. Autumn Quarter. Four meetings each week, a fifth at the option of the instructor. Given biennially, alternating with Spanish 607-608. Prerequisite, Spanish 417. Mr. Hendrix.

A survey of the movements in Spanish drama and poetry during the first half of the Nineteenth Century. Lectures, collateral reading, and report.

610. Modern Spanish Drama. Five credit hours. Winter Quarter. Four meetings each week, a fifth at the option of the instructor. Given biennially, alternating with Spanish 607-608. Prerequisite, Spanish 417. Mr. Hendrix.

A survey of the movements in Spanish drama and poetry during the second half of the Nineteenth Century. Lectures, collateral reading, and report.

611. Drama of the Golden Age. Five credit hours. Winter Quarter. Four meetings each week, a fifth at the option of the instructor. Given in alternate years. Prerequisite, Spanish 417. Mr. Anibal.

An intensive study of a limited number of plays of the representative dramatists. Lectures, collateral reading, discussion, and reports.

***613. The Picaresque Novel.** Five credit hours. Winter Quarter. Four meetings each week, a fifth at the option of the instructor. Prerequisite, Spanish 417. Mr. Anibal.

An intensive study of *Lazarillo de Tormes*, *Guzmán de Alfarache*, and *El Buscón*. Lectures, collateral readings, discussion and reports.

***614. Cervantes.** Five credit hours. Autumn Quarter. Four meetings each week, a fifth at the option of the instructor. Given in alternate years. Prerequisite, Spanish 417. Mr. Anibal.

A study of the works of Cervantes with special emphasis on the *Quixote*. Lectures, collateral reading, discussion, and reports.

* Not given in 1947-1948.

615. Survey of Spanish Literature from the Earliest Times to the Seventeenth Century. Five credit hours. Winter Quarter. Four meetings each week, a fifth at the option of the instructor. Given in alternate years. Prerequisite, Spanish 417. Mr. Anibal.

Lectures, collateral reading, discussion, and reports.

616. Survey of Spanish Literature of the Seventeenth and Eighteenth Centuries. Five credit hours. Spring Quarter. Four meetings each week, a fifth at the option of the instructor. Given in alternate years. Prerequisite, Spanish 417. Mr. Anibal.

Lectures, collateral reading, discussion and reports.

617. Modern Spanish Syntax. Five credit hours. Autumn Quarter. Required for Education 536. Prerequisite, Spanish 417. Mr. Anibal.

A course designed for advanced students who expect to teach Spanish. Appreciation of the details of grammar, illustrated with composition and with analysis of contemporary texts.

620. Spanish Pronunciation and Diction. Five credit hours. Winter Quarter. Required for Education 536. Prerequisite, Spanish 417.

Careful and detailed study of special problems involved in teaching Spanish to English-speaking students. Laboratory analysis of differences between English and Spanish pronunciation.

623. Spanish Translating and Interpreting. Three credit hours. One Quarter. Winter and Spring. Prerequisite, Spanish 410 and 605 or equivalent with a grade not lower than "C." Mr. Hendrix.

This course gives experience in rapid translation from English to Spanish and from Spanish to English such as may be demanded in military or diplomatic service.

626. The Spanish Drama of the Sixteenth Century. Five credit hours. Spring Quarter. Four meetings each week, a fifth at the option of the instructor. Prerequisite, Spanish 417. Mr. Anibal.

630. Survey of Spanish-American Literature. Five credit hours. Spring Quarter. Four meetings each week, a fifth at the option of the instructor. Prerequisite, Spanish 417. Mr. Hendrix.

A study of the masterpieces of Spanish-American literature up to 1900. Lectures, collateral reading, discussion, and reports.

***640. Twentieth Century Spanish Literature.** Three credit hours. Lectures, collateral readings, and reports. Prerequisite, Spanish 417 or equivalent. Mr. Hendrix.

The Generation of 1898 and its successors, particularly the essayists and poets. Lectures, collateral reading, discussion, and reports.

***641. Twentieth Century Spanish Literature (Continued).** Three credit hours. Lectures, collateral readings, and reports. Prerequisite, Spanish 417 or equivalent. Mr. Hendrix.

The Generation of 1898 and its successors, particularly the essayists and poets. Lectures, collateral reading, discussion, and reports.

650. Spanish America in Twentieth Century Literature. Three credit hours. Autumn Quarter. Lectures, collateral readings, and reports. Prerequisite, Spanish 417 or equivalent. Mr. Hendrix.

The course will be devoted to Poets of the "New Generation" including Gabriela Mistral, Pedro Prado, Enrique Banchs, Alfonsina Storni, Vicente Huidobro, Juana de Ibarbourou and Jorge Luis Borges, and the contemporary novel of the Argentine, including the works of César Duayen, Roberto J. Payró, Enrique Rodríguez Larreta, Manuel Gálvez, Benito Lynch, Ricardo Güiraldes, and Hugo Wast.

651. Spanish America in Twentieth Century Literature (Continued). Three credit hours. Winter Quarter. Lectures, collateral readings, and reports. Prerequisite, Spanish 417 or equivalent. Mr. Hendrix.

This course will take up the contemporary novel of Uruguay in the works of Justino Zavala Muniz and Horacio Quiroga, in Chile of Eduardo Barrios and F. Santiván, in Bolivia of Alcides

* Not given in 1947-1948.

Arguedas, in Ecuador of Jorge Icaza, in Colombia of José Eustacio Rivera, in Venezuela of Rufino Blanco Fombona, Rómulo Gallegos, and Teresa de la Parra, in Mexico of Mariano Azuela, Rafael Delgado, José López Portillo y Rojas, Federico Gamboa, Mauricio Magdaleno, López y Fuentes, Icaza, Rubén Romero, and Mena Brito, in Guatemala of Rafael Arevalo Martínez, in Cuba of Loveira, and in Santo Domingo of Tulio M. Cestero.

652. Spanish America in Twentieth Century Literature (Continued). Three credit hours. Spring Quarter. Lectures, collateral readings, and reports. Prerequisite, Spanish 417 or equivalent. Mr. Hendrix.

This course will take up the later works of contemporary writers in Spanish American literature.

***660. The Comedia of Lope de Vega and his School.** Three credit hours. Winter Quarter. Prerequisite, Spanish 417 or its equivalent.

The development of Lope's formula and a study of representative plays; Tirso de Molina; Alarcón. Lectures, collateral reading, discussion, and reports.

705-706-707. Honors Courses in Spanish. Three to ten credit hours. Autumn, Winter, and Spring Quarters. Work in conference, library, or phonetics laboratory. Prerequisite, senior standing, with a record of "A" in at least half of the Spanish courses and an average of "B" in the remainder, and the approval of the department. Mr. Anibal, Mr. Hendrix.

This course is intended to give undergraduates of special aptitude a greater opportunity to do independent study than is possible in the ordinary course.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 692.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

RURAL ECONOMICS AND RURAL SOCIOLOGY

Office, 113 Townshend Hall

PROFESSORS FALCONER AND MANGUS

RURAL SOCIOLOGY

505. Rural Life. Five credit hours. One Quarter. Autumn and Winter. Prerequisite, sophomore standing. Mr. Mangus.

A study of the organization, development and current problems of rural life. Present conditions and factors involved in rural life improvement.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

***606. Rural Sociology.** Five credit hours. Winter Quarter. Prerequisite, ten hours of general sociology. Given in alternate years. Mr. Mangus.

A general course in the sociology of rural life. Emphasizes the fundamental and conditioning factors in rural social development, rural social institutions, and the nature of rural social organization.

* Not given in 1947-1948.

RUSSIAN
Office, 213 Derby Hall

EXECUTIVE COMMITTEE: DEAN HATCHER, PROFESSOR BLUME,
ASSISTANT PROFESSOR EPP

412. Elementary Russian (Slavic). Five credit hours. Autumn Quarter.
Five meetings each week. Mr. Epp.

The elements of Russian grammar, reading of easy prose and poetry; oral and written practice.

Not open to students who have credit for National Service Course 412.

413. Elementary Russian (Slavic). Five credit hours. Winter Quarter.
Five meetings each week. Prerequisite, Russian 412. Mr. Epp.

The elements of Russian grammar; reading of easy prose and poetry; oral and written practice.

Not open to students who have credit for National Service Course 413.

414. Elementary Russian (Slavic). Five credit hours. Spring Quarter.
Five meetings each week. Prerequisite, Russian 413. Mr. Epp.

Reading of prose and poetry; oral and written practice; grammar review.

Not open to students who have credit for National Service Course 414.

†415. Elementary and Intermediate Russian (Slavic). Fifteen credit hours. Fifteen recitations each week. Mr. Epp.

This is an intensive course in which for one Quarter the student will devote his entire time to the mastery of Russian. The elements of Russian grammar will be given with abundant oral and written exercises, together with readings from Russian literature.

The course is especially planned for students who expect to enter military or governmental service and desire a fairly comprehensive knowledge of this most important language. The number of students will be limited to twelve.

Not open to students who have credit for National Service Course 415.

416. Elementary Scientific Russian. Two credit hours. Spring Quarter.
Prerequisite, Russian 413.

535. Advanced Russian. Five credit hours. Autumn Quarter. Five recitations each week. Prerequisite, Russian 414 or 415. Mr. Epp.

Readings from Pushkin and the libretto of the opera "Prince Igor" supplemented by suitable readings from Russian history and geography.

Not open to students who have credit for National Service Course 535.

536. Advanced Russian. Five credit hours. Winter Quarter. Five recitations each week. Prerequisite, Russian 414 or 415. Mr. Epp.

Readings from Gogol, Chekhov, and the libretto of the opera "Sadko" supplemented by suitable readings from Russian history and geography.

Not open to students who have credit for National Service Course 536.

537. Advanced Russian. Five credit hours. Spring Quarter. Five recitations each week. Prerequisite, Russian 414 or 415. Mr. Epp.

Readings from Tolstoi, Maxim Gorki, and the libretto of the opera "Boris Godunov" supplemented by suitable readings from Russian history and geography.

Not open to students who have credit for National Service Course 537.

538. Advanced Scientific Russian I. Two credit hours. Winter Quarter.
Prerequisite, Russian 414 or 415, or 416.

539. Advanced Scientific Russian II. Two credit hours. Spring Quarter.
Prerequisite, Russian 538.

SCHOOL ADMINISTRATION
(See Education)

SHOPWORK
(See Industrial Engineering)

† Not given during the academic year, 1947-1948.

SOCIAL ADMINISTRATION

Office, 303 Social Administration Building

PROFESSORS STILLMAN, PATERSON, AND BATCHELOR, ASSOCIATE
PROFESSOR HAMILTON

510. Introduction to Rehabilitation. Three credit hours. One Quarter. Autumn and Spring. Mr. Hamilton.

The course is designed to introduce students to the field of rehabilitation. It presents definitions and functions, furnishing a background of information as a preparation for advanced courses.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

618. The Field of Social Work. Four credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Sociology 402, 407, or 410, or the equivalent.

A survey of contemporary social work by functional groupings of services such as social case work, group work and community organization. Emphasis on the objectives, processes and personnel requirements in each functional grouping. Consideration also given to the relationship of social work to other social developments and social forces, current and historical.

Not open to students who have credit for Social Administration 676.

Not open for graduate credit.

646. Group Work and Recreational Agencies. Four credit hours. One Quarter. Winter and Spring. Prerequisite, Sociology 402, 410, or 407, or the equivalent. Mr. Batchelor.

A study of the group work and recreational resources of the community; public and semi-public. Consideration of the principles and objectives of group work and of community recreation. The place of commercialized recreation in American cities and towns; legislative and other controls.

647. Leadership and Direction of Group Activities. Three credit hours. One Quarter. Autumn and Winter. Lectures, readings, practical demonstrations, field work. Prerequisite, Sociology 402, 407, or 410, or the equivalent. Sociology 645 is strongly recommended as a preliminary or concurrent course. Mr. Batchelor.

Consideration of problems of leadership and practice in methods of directing boys' and girls' clubs and adult leisure groups. The use of active and quiet games, stories, music, dramatics, folk recreation, and crafts, including demonstrations, field trips, field practice, and instruction in the various techniques.

668. Community Welfare Resources. Four credit hours. One Quarter. Autumn, Winter, Spring. Four class meetings each week. Prerequisite, Sociology 402, 407, or 410, or the equivalent. Social Administration 618 for Social Administration students. Mr. Shimp.

An analysis of the various types of social work resources commonly comprising a community's total welfare facilities. Special attention given to the general principles and methods employed in the administration of various public assistance programs including Aid for the Aged, Aid to the Blind, Aid to Dependent Children, and General Assistance. Consideration given to the functional interrelationships of agencies and methods of developing an orderly pattern of social work within the community.

670-671. Community Health Organization. Three credit hours each. Winter Quarter. Prerequisite, Sociology 402, 410, or 407, or the equivalent. Mr. Paterson.

The aims and historical developments of public health, with particular reference to England and the United States of America.

SOCIOLOGY

Office, 112 Hagerty Hall

PROFESSORS DENUNE, LUMLEY (EMERITUS), NORTH, RECKLESS, BATCHELOR, AND BERRY, ASSOCIATE PROFESSOR CUBER, ASSISTANT PROFESSORS WOLFF, ROBINS, AND BENNETT, MR. NISSEN, MR. DESENBURG, MR. HARPER, MR. JACOBSON, MR. ADAMS, MR. SEEMAN, AND MR. SPUHLER

The attention of students wishing to secure a basic preparation in anthropology is called to the following courses: 501, 508, 607, 612, 618, 630, 681, 820.

401-402. Introductory Sociology. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. All instructors.

A study of the fundamental concepts and problems of sociology. Textbook, assigned reading, lectures, discussions, reports.

407. Educational Sociology. Five credit hours. One Quarter. Autumn, Winter, Spring. Field trips, visits to local institutions, projects. Prerequisite, Sociology 401. Mrs. Robbins and assistants.

Sociological background of school children, current social trends as they affect education and resultant social functions of the schools.

Not open to students who have credit for Sociology 402.

410. Introductory Sociology. Five credit hours. One Quarter. Autumn, Winter, Spring.

A study of the fundamental concepts of sociology designed especially for students in Industry. The nature of society; the social forces; social evolution; some typical social problems such as those of industry, eugenics, education, and democracy.

Not open to students who have credit for Sociology 401-402.

501. Introduction to Cultural Anthropology. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, sophomore standing. Mr. Bennett, Mr. Spuhler.

An introductory survey of the field of anthropology. Racial differences and their significance; theories of culture growth and diffusion; the varieties of culture; the social behavior of man as illustrated by the simpler societies.

502. An Introduction to Physical Anthropology. Five credit hours. Autumn Quarter. Prerequisite, sophomore standing or the equivalent. Mr. Spuhler.

An outline of the organic development of man; a review of the evidence for human evolution as found in the fossil apes and early human types; prehistoric archaeology and the development of culture; the modern ethnic groupings of man.

Not open to students who have credit for Sociology 400.

505. The Sociology of Urban Life. Five credit hours. Spring Quarter. Prerequisite, Sociology 402, 407, or 410, or the equivalent.

The place of the city in social organization. The emergence of urbanism. Racial, cultural, and economic groupings. Physical, intellectual, and aesthetic well-being of the urban population and the agencies identified with these problems.

510. The Standard of Living. Four credit hours. Spring Quarter. Four class meetings each week. Prerequisite, Sociology 401-402, or Economics 401-402. Mr. Nissen.

A consideration of the content of the various standards of living in American society, their economic and social significance. Problems in family budgets and retail buying.

Not open to students who have credit for Sociology 610.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

600. The Modern Family. Four credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Sociology 402, 407, or 410, or the equivalent. Mr. Denune, Mr. Cuber, Mr. Desenberg.

An examination of the results of the impact of modern culture upon the family with special reference to such factors as size of family, member relationships, economic problems, divorce, desertion, status of women.

601. Types of Family Organization. Four credit hours. Spring Quarter. Prerequisite, Sociology 402, 407, or 410 or the equivalent. Mr. Denune.

A survey of family organization from primitive times to the present; an analysis of the factors that entered into their development.

605. Race Relations. Three credit hours. Winter Quarter. Prerequisite, Sociology 402, 407, or 410 or the equivalent. Mr. Berry.

A study of majority and minority group relations, ideology of race, interracial conflicts, institutional changes, personality disorganization, planned assimilation, acculturation as a natural process.

607. Race Contacts and Culture Conflicts. Four credit hours. Spring Quarter. Prerequisite, Sociology 401-501, or 410-501, or permission of the instructor. Mr. Bennett.

Problems arising from contact of culture, with particular attention to the acculturation of preliterate peoples by European civilization.

***612. Social Organization of Preliterate Peoples.** Three credit hours. Autumn Quarter. Given in alternate years. Prerequisite, Sociology 402, 501 or the equivalent. Mr. Bennett.

The development of forms of social organization in simpler societies; the dynamics of social relations in such societies; a comparison of simpler forms of social structure with complex forms.

613. Religion in Simpler Societies. Four credit hours. Winter Quarter. Prerequisite, Sociology 402, 501 or the equivalent. Mr. Bennett, Mr. Spuhler.

A study of the ideas and way of life of simpler peoples, preliterate and contemporary, with emphasis on religion and sacred beliefs, and the relationship of these beliefs to social organization.

622. Human Nature and Social Adjustment. Three credit hours. Winter Quarter. Prerequisite, Sociology 401-402, or 401-407, or 410 or the equivalent. Mrs. Robbins.

Nature of human nature; process of socialization; social change and individual demoralization; social roles in conflict situations; re-direction of social activity.

623. Collective Social Behavior. Three credit hours. Autumn Quarter. Prerequisite, Sociology 401-402, or 401-407, or 410 or the equivalent. Mrs. Robbins.

A study of the kinds of mass action arising in crowds, mobs, strikes, audiences and the public. Problems and techniques of study and control.

625. Criminology. Three credit hours. One Quarter. Autumn and Spring. Prerequisite, Sociology 401-402. Mr. Reckless.

The nature, variation, and causes of crime and delinquency. Studies of criminal liability, criminal careers, and organized crime and racketeering.

629. General Sociology. Four credit hours. Autumn Quarter. Prerequisite, junior standing and Sociology 401 and 402 or 407; or thirty hours in not more than two allied subjects. Mr. North.

A critical examination of the more fundamental ideas and concepts of modern scientific sociology.

630. Indians of North America. Three credit hours. Spring Quarter. Prerequisite, Sociology 402, 501 or the equivalent. May be taken in a two-course sequence with Sociology 632. Mr. Bennett, Mr. Spuhler.

A survey of American Indian Cultures in their tribal state at the time of European conquest, with a briefer study of the Indian as a minority group in Modern America. Motion pictures and slides.

632. North American Indian Prehistory. Four credit hours. Autumn Quarter. Prerequisite, Sociology 402, 501 and 502, or the equivalent. Mr. Bennett, Mr. Spuhler, Mr. Morgan and Museum staff.

A survey of American Indian archaeology. The origin and development of Indian culture north of Mexico from the first peopling of the continent to the coming of the Europeans. Motion pictures, slides, museum study.

* Not given in 1947-1948.

633. Dynamics of American Culture. Three credit hours. Winter Quarter. Given in alternate years. Prerequisite, Sociology 402, 501, or the equivalent. Mr. Bennett, Mr. Spuhler.

A review of social scientific analyses of American customs, institutions, social systems and ideas, with emphasis on recent cultural anthropological studies.

645. Leisure and Recreation. Four credit hours. One Quarter. Autumn and Spring. Prerequisite, Sociology 401-402. Mr. Batchelor.

The sources of leisure in early and modern society. The social significance and uses of leisure. The social functions of play. Historical aspects of play. The recreation problems of modern communities from the standpoint of control and of public provision.

656. Rural Social Institutions. Four credit hours. Autumn Quarter. Prerequisite, Sociology 402, 407, or 410 or the equivalent. Mr. Denune.

The problems of health, recreation, social intercourse, housing, child welfare, dependency, defectiveness, and delinquency in American rural communities and small towns. The agencies and organizations dealing with these problems.

665. Propaganda and Social Control. Three credit hours. Autumn Quarter. Prerequisite, Sociology 402, 407, or 410 or the equivalent. Mr. Wolff.

The nature, methods and extent of propaganda, scientific information, rewards, punishment and other means of social control.

676. Social Classes. Four credit hours. Winter Quarter. Four class meetings each week. Prerequisite, Sociology 402, 407, or 410 or the equivalent. Mr. North.

Class distinctions as a phase of social differentiation. The origin and characteristics of social classes. The significance for modern society of class consciousness, class struggle, and social mobility.

677. Social Organization in a Changing World. Four credit hours. Spring Quarter. Four class meetings each week. Prerequisite, Sociology 402, 407, or 410 or the equivalent. Mr. North.

An examination of the adaptability of present institutional organization to the situation created by world reorganization. The impact of world problems upon American culture. Implications of democracy for social reconstruction.

678. Community Action and the School. Three credit hours. Autumn Quarter. Prerequisite, Sociology 401 and 407 or consent of the instructor. Mrs. Robbins.

Nature and integration of the American Community: structure, processes, leadership of local social action groups; the participation of school personnel in cooperative efforts to solve local and regional problems.

680. Social Orientation of Children. Four credit hours. Winter Quarter. Three class sessions each week and one hour for field study of a child group. Prerequisite, Sociology 402 or 407 or permission of instructor. Mrs. Robbins.

A study of the ways in which society socializes children, with parallels from more stable and less complex cultures. Current breakdowns in the socializing process and implications for the school and other educational agencies.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SPANISH

(See Romance Languages and Literatures)

SPECIAL EDUCATION

(See Bureau of Special and Adult Education)

SPEECH

Office, 205 Derby Hall

PROFESSORS YEAGER, KETCHAM, WILEY, HARDING, SUMMMERS, MORRIS, AND KNOWER, ASSOCIATE PROFESSORS EMSLEY, McDOWELL, SCHRECK, UTTERBACK, AND McGAW, ASSISTANT PROFESSORS MASON, RILEY, PHILIPPI, LECTURER RAMSDELL, MR. SIFRITT, MR. WOOTTON, MR. AINSWORTH, MR. FOTHERINGTON, MR. HOAK, AND ASSISTANTS

Individual Instruction in the Speech and Hearing Clinic

On a non-credit basis individualized instruction is provided for students with voice, speech, or hearing disabilities. To the limit of available staff personnel this special instruction is available during all quarters. Students desiring such instruction should arrange for a consultation with the Director of the Speech and Hearing Clinics, Room 322, Derby Hall, telephone extension 742.

Courses in other Departments

For courses on the Psychology of Speech, Psychology of the Audience, and Tests and Measurements in Speech Education, see the offerings of the Department of Psychology, for a course on The Teaching of Speech in College, see the offerings of the Department of Education, both in the Bulletin of the College of Education; for a Seminar in Speech Education see the offerings of the Department of Education in the Bulletin of the Graduate School. For Acoustics for Students of Music and Speech see Physics 645, in the Bulletin of the College of Arts and Sciences.

401. Principles and Practice of Effective Speaking I. Five credit hours. One Quarter. Autumn, Winter, Spring. No prerequisite. Mr. Ketcham and staff.

The principles of speech composition and delivery. Practice in preparing and presenting short informative, entertaining, and persuasive speeches. Audience analysis and control. Emphasis is placed upon speaking as a thinking process. Voice and Diction. The methods in which the student is trained are applicable to social and business conversation as well as to public address.

402. Principles and Practice of Effective Speaking II. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Speech 401. Mr. Utterback and staff.

Continuation of Speech 401. Group discussion and conference speaking. Cooperative conversation directed toward the forming of decisions by committees, small groups, and limited assemblies. Special attention to the speaking problems which arise in business and professional relationships. The class is divided into small groups for practice under the supervision of the instructor.

407. Improving the Speaking Voice. Three credit hours. All Quarters. Two lectures and three hours of laboratory each week. Open to Freshmen. (Instructor will recommend Speech 410 if there is a voice deficiency). Not open for credit to students who receive credit for Speech 401 or 402.

The speaking voice: its significance in personality. Development of a flexible and dynamic voice for business and professional life, public speaking, radio and stage. Laboratory and class practice with particular emphasis on recording and reproducing the voice in speech. Sections on the basis of needs and special objectives, as, for example, theatre, radio, public address.

410. Personal Speech Improvement I. No credit hours. One Quarter. Autumn, Winter, Spring. Open to Freshmen. Mr. Norris and staff.

Enrollment in this course is largely on the basis of individual recommendation by one of the counselling agencies in the various colleges. Students are recommended who demonstrate a need for improvement in clarity of speech or quality of voice, or, who because of defensive hearing, need to develop skill in visual comprehension of spoken languages. The students are divided into sections in terms of their needs and abilities in order that instruction may be adapted accordingly. Basic instruction in the nature of speech sounds, voice production and visual hearing serves as a foundation for an intensive program of personal improvement. Individual clinical attention is given as may be needed. Students enrolling are divided into the following section-types:

- (1) Inadequate grammar and pronunciation
- (2) Inadequate articulation (without organic deviation)
- (3) Inadequate articulation with organic deviation
- (4) Inadequate voice
- (5) Foreign dialect
- (6) Hard-of-hearing
- (7) Stuttering
- (8) Other, as may from time to time be necessary

411. Personal Speech Improvement II. No credit hours. One Quarter. Autumn, Winter, Spring. Open to Freshmen. Mr. Morris and staff.

A continuation of Speech 410.

470. Argumentation. Five credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite Speech 401.

504. Speech Functions and Responsibilities of the Teacher. Three credit hours. One Quarter. Winter and Spring. Discussions, lectures, reading practice, observations. Prerequisite, five Quarters of university work. Miss Sanderson.

Emphasis will be placed upon a study of (1) the development of language skills in children from infancy through adolescence; (2) speech needs commonly found in the classroom; and (3) the teacher's voice as a factor in the educative process.

505. Oral Interpretation. Five credit hours. One Quarter. Autumn, Winter, Spring. Mr. Wiley, Miss Sanderson.

Reading of poetry and prose for private and professional use, including teaching, with special consideration of variety, range, appreciation, and expression. The general purpose of this course is to give the student further help in developing a deeper intellectual and emotional appreciation of literary values which may be expressed in oral reading. The student is taught to discriminate between selections which may be read orally and those which are not adapted to such reading. Laboratory facilities are available to students in this course.

Not open to students who have credit for Speech 614.

521. Acting I. Three credit hours. One Quarter. Autumn, Winter, Spring. Three recitations each week. Mr. Schreck, Mr. McGaw, and staff.

Study and practice in the fundamentals of acting technique. The importance of voice, posture, gesture, and movement in theatrical expressiveness. The achievement of stage presence.

522. Acting II. Three credit hours. One Quarter. Winter and Spring. Prerequisite, Speech 521. Mr. Schreck, Mr. McGaw and staff.

Studies and exercises in the imaginative creation of character for the stage. The physical, mental, and emotional processes involved in analyzing character as perceived by the dramatist and developed in effective stage presentation.

Not open to students who have credit for Speech 638.

523. Acting III. Three credit hours. Spring Quarter. Prerequisite, Speech 522. Mr. Schreck, Mr. McGaw, and staff.

A study of audience response and the creation of favorable empathies. The relation of the individual performance to the whole play as demonstrated in actual rehearsal.

Not open to students who have credit for Speech 639.

541-542-543. Stagecraft. Three credit hours each Quarter. 541, Autumn and Spring; 542, Winter; 543, Spring. Six laboratory periods each week. Mr. Philippi.

A practical course in the building, painting, and rigging of scenery, along with the principles and practice in stage lighting, and back-stage organization. A study of modern methods of staging.

560. Radio Speech. Two credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Speech 401 or the equivalent and Arts Survey 405. Not open to Freshmen. Three recitations each week. Mr. Summers and staff.

The radio situation applied to speech, and fundamentals of microphone technique. Practice in speaking, announcing and acting for radio. Voice recordings for critical analysis.

Not open to students who have credit for Speech 510.

562. The Radio Talk. Three credit hours. One Quarter. Autumn, Winter, Spring. Prerequisite, Speech 560. Mr. Summers and staff.

Planning and writing of radio talks, interviews, forums and roundtables and similar informative materials based on the straight talk technique.

Not open to students who have credit for Speech 510.

565. Radio Program Production. Three credit hours. Winter Quarter. Open on permission of the instructor to students whose vocational objectives will be served by this course.

Training in basic techniques of program directing and production of radio program forms in general use on local stations, with extensive practical experience in program directing under studio conditions.

580. Bases of Speech Production. Five credit hours. Autumn Quarter. No prerequisites. Physics 411 and Zoology 401 are desirable background courses.

An introduction to the scientific bases of speech. An orientation to the psychological, neurological, physiological physical genetic phonetic and sociological aspects of speech productions. Demonstrations of various laboratory techniques for study of speech manifestations.

585. Introduction to Phonetics. Three credit hours. Winter Quarter. Prerequisite, Speech 580.

Mastery of the International Phonetic Alphabet as applied to American Speech with a comparative study of General American Eastern American Southern American and Received Standard British pronunciations. Analysis of the physiological positions and movements involved in the production of English speech sounds with study of the coordination of these movements in correct speech.

Not open to students who have credit for Speech 503 or Speech 618.

590. Speech Development in Children. Three credit hours. Spring Quarter. No prerequisite.

The developmental sequence of language growth from the first vocalization to the expression of abstract thought. Deviations from the normal patterns are noted.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

University requirements for any of the courses in this group specify a prerequisite of junior standing and either (a) 30 Quarter hours in not more than two allied subjects, or (b) 10 hours in such allied subjects, plus 10 hours in Speech. Five hours each from the 401-402 and the 410-411 sequences are advisable.

601. The Forms of Public Address. Five credit hours. Spring Quarter. Prerequisite, ten hours in Speech. Mr. Yeager.

A study of special methods by which speech is made clear, interesting, and forceful. Practice in using these methods in the preparation and delivery of the different forms of public address, including nominating, dedicatory, eulogistic, after-dinner, and general academic, political, and business speeches. A broad view of language training is given with the object of increasing the student's command of thought in writing and talking as well as in public speaking.

603. Group Thinking and Conference Leadership. Five credit hours. Winter Quarter. Prerequisite, junior standing or above and ten hours of speech or equivalent. Mr. Utterback.

The procedures used in exchanging information, solving problems, determining policies, and resolving differences in committees and other small groups. The methods of leading discussions and conferences.

610. Advanced Debate. Five credit hours. One Quarter. Autumn and Winter. Two practice periods and special meetings each week. Prerequisite, Speech 470.

An advanced course for students who show special ability in debate.

Not open for graduate credit.

617. Problems of American Phonetics. Three credit hours. Spring Quarter. Prerequisite, twenty hours in the Department of Speech, including Speech 585. Mr. Emsley.

The chief problems treated are: phonetic alphabets and dictionaries, dialect researches, and phonemic analysis.

620. Ancient Rhetorical Theory. Three credit hours. Autumn Quarter. Prerequisite, Speech 601. Mr. Wiley, Mr. Harding.

A study of the rhetorical theories of Plato, Aristotle, Cicero, Quintilian and other important classical writers.

631-632-633. History of the Theatre. Three credit hours each Quarter. Winter, Spring. Prerequisite or concurrent, English 550; English 670 is recommended. Mr. McDowell.

A general survey of the rise and development of the theatre: the Classical, Medieval, Renaissance, Commedia dell'arte, later English and Continental, and Modern Theatre. Particular reference will be given to the origin of theatrical forms, and to staging in relation to the forms along with the reading of selected plays, reports, and round-table discussions. Illustrations of stage and scenery will accompany each lecture.

635-636. Theatrical Criticism. Three credit hours each Quarter. Winter and Spring. Prerequisite or concurrent, one of the following courses: English 676, 669, 670. Mr. McDowell.

A survey of critical theories from the Greek to the modern period with particular reference to the influence of the theorists, the church, the state, and the press in the development of the theatre. Illustrated lectures will establish the connection between critical opinion and stage practice. Attention will be given to an analysis of dramatic forms and conventions, a study of current newspaper and magazine criticisms with practice in writing reviews, and a consideration of the stage and the movies as art forms.

641. Theatrical Costuming. Five credit hours. Autumn Quarter. Prerequisite, Speech 541. Mr. McGaw.

Practical instruction in making theatrical costumes. Materials and their uses. How to analyze a play for costume requirements. Sources for authentic period costumes.

643. Children's Theatre. Three credit hours. Winter Quarter. Prerequisite, Speech 645, 646, 647, or an equivalent. Mr. Schreck.

Directing and producing plays for children. Improvization of short scenes. Judging and editing the text. Each student will direct a short play.

644. Experimental Theatre. Three credit hours. Spring Quarter. Prerequisite, Speech 521, 645, 648. Mr. Schreck.

Production of original plays, particularly those dealing with folk and regional material. The technique of the living newspaper.

645. Stage Direction I. Three credit hours. Autumn Quarter. Two hours lecture and two hours laboratory each week. Prerequisite or concurrent, English 670, Speech 521 and 522. Mr. Schreck, Mr. McGaw.

Study and practice in the fundamentals of stage direction. Aesthetic distance, unity, emphasis, rhythm, tempo, balance, stage business and interpretation of lines are considered. The class members direct short scenes.

648-649-650. Playwriting. Three credit hours each Quarter. Autumn, Winter, Spring. Prerequisite or concurrent, one of the following courses: English 676, 669, or 670. Mr. McDowell.

Elementary laboratory course in playwriting. Methods of play analysis with attention to dramatic technique. An historical consideration of the major forms of drama.

Speech 648 not open to students who have credit for Speech 637.

654. Radio Writing. Five credit hours. Autumn Quarter. Prerequisite, Speech 562, either English 505, 506 or 507 and permission of the instructor. Mr. Riley.

Planning and writing of continuities of the more important types of radio programs, including musical, variety, audience participation, and special events broadcasts. Special attention given to the structure of programs and to the use of special interest techniques.

661. Radio Laboratory Practice. One credit hour each Quarter. Autumn, Winter, Spring. Prerequisite, Speech 562 and 565. Mr. Summers and staff.

Courses may be repeated for a total of five credit hours. Practical experience in broadcasting over local radio stations, or laboratory work in specialized program fields under studio conditions.

Not open for graduate credit.

662. Radio Dramatic Writing. Three credit hours. Spring Quarter. Prerequisite, Speech 654. Mr. Riley.

Consideration of the place of drama in radio programming; analysis of major dramatic program types, and study of problems of setting, characterization and plot structure as applied to radio. Extensive work in the preparation of dramatic scripts.

Not open to students who have credit for Speech 515.

678. Hearing and Speech. Three credit hours. Autumn Quarter. Prerequisite or concurrent, Speech 677 and Physics 645.

A consideration of the nature of hearing and its effect on speech. Examination of related researches in otology, medicine, audiometry, acoustics, residual hearing. Laboratory experience.

Not open to students who have credit for Speech 657.

682. Hearing Conservation and Pathology. Three credit hours. Autumn Quarter. Prerequisite, ten hours in Speech or Psychology.

Introduces the student to the area of hearing therapy. A consideration of hearing deficiencies

and their effect on social, personal and school adjustment. Special attention to cooperation between therapist and physician in promoting hearing conservation. Information on prevalence, causes, types, and effects of hearing impairments.

683. Lip Reading. Three credit hours. Winter Quarter. Five recitations each week. Prerequisite, Speech 580, 585 and 682.

The visual-speech-reading problems of those with sufficient residual hearing to justify continuance in the public schools rather than reference to schools for the deaf. Foundation procedures and fundamental exercises. Practice with hard-of-hearing persons under direct supervision.

684. Lip Reading Clinic. Three credit hours. One Quarter. Autumn, Winter, Spring. Five meetings each week. Prerequisite, Speech 683.

Clinical application of principles learned in Speech 683.

686. Visual Hearing Techniques. Two credit hours. Winter Quarter. Three meetings each week. Miss Mason.

History, development and application of the visual hearing film technique. Lectures, laboratory demonstrations.

Not open to students who have credit for Speech 656.

Not open for graduate credit.

688. Audiometry and Hearing Aids. Three credit hours. Spring Quarter. Prerequisite, Physics 645 and Speech 677.

A course designed to equip speech therapists, teachers of the deaf and hard-of-hearing, psychologists and public health nurses with the fundamental principles involved in acoustic measurement. Definition of theory, terms and general technique. Types of audiometers and methods used in measuring functional hearing. Study of audiograms, with relation to indication of types of hearing deficiencies. Observation of audiometric testing procedure and experience in actual testing under supervision. Study of current techniques in fitting of hearing aids to individual needs.

Not open to students who have credit for Speech 780.

690. The Pre-School Deaf Child. Three credit hours. Winter Quarter. Prerequisite, Speech 590.

Study of problems peculiar to the pre-school deaf child.

694. Speech Disorders Survey. Three credit hours. Autumn Quarter. Prerequisite, Speech 580, 585, and 590. Mr. Morris.

Introduction to the area of disorders of speech. Primary attention is given to more common speech deviations. Students observe examinations and corrective methods of clinicians in the speech clinic.

695. Voice and Articulation Disorders. Three credit hours. Winter Quarter. Lectures, demonstrations, observations. Prerequisite, Speech 694. Mr. Morris.

A continuation of Speech 694 with special consideration of severe voice deviation and articulation disorders, such as cleft palate, cerebral palsy, paralysis, and maxillo-facial injuries.

697. Clinical Principles in Speech Correction. Three credit hours. One Quarter. Autumn and Spring. Five meetings each week. Prerequisite or concurrent, Speech 694. Mr. Ainsworth.

Emphasis on the examination, diagnosis and correction of speech disorders. Observation and explanation of clinical procedures.

698. Clinical Practice in Speech Correction. Three credit hours. One Quarter. Autumn, Winter, Spring. Five meetings each week. Prerequisite, Speech 695 and 697. Mr. Ainsworth.

Clinical practice in Speech Correction. The student will be given opportunity to study and work with a wide range of speech cases in the University Clinic. The Orientation Week Health Line, etc. To make arrangements he should, therefore, if possible, communicate with the department well before the opening of the Quarter.

Not open to students who have credit for Speech 692.

700. Minor Problems in Speech. One to five credit hours. All Quarters. Conference, library, and laboratory work. Prerequisite, permission of the instructor and the chairman of the department. This course may be repeated for a total of fifteen credit hours.

705. Areas and Techniques of Research in Speech. Three credit hours. Autumn Quarter. Prerequisite, twenty-five hours in Speech. Mr. Knowler and staff.

Explanation of the principal areas of graduate research in speech with a review and critical commentary on the research already done in each. Discussion of possible future investigations and of the techniques and standards of research used in the several areas. Library, Clinic, and Laboratory facilities. Preparation of bibliographies and research reports.

721. Survey and Analysis of Legal Speaking. Three credit hours. Winter Quarter. Prerequisite, Speech 620. Mr. Wiley.

Representative courtroom arguments of eminent lawyers from the earliest times to the present are analyzed, and the persuasive devices of the pleaders identified. Attention is given to cross-examination as a persuasive technique.

722. Survey and Analysis of Occasional Speaking. Three credit hours. Spring Quarter. Prerequisite, Speech 620. Mr. Harding.

Representative popular or occasional speakers and their speeches in the churches, in political campaigns, in agitating for economic, social, educational, and political reforms, in informing and entertaining popular audiences, from the earliest times to the present, are studied and analyzed.

***723. Survey and Analysis of Legislative Speaking.** Three credit hours. Spring Quarter. Prerequisite, Speech 620. Given in alternate years.

Representative speakers and their speeches of the Greek, Roman, European, British, and American legislative assemblies, from the earliest times to the present, are studied in detail, and their persuasive methods analyzed.

740. Theatre Organization and Management. Five credit hours. Winter Quarter. One two-hour session each week. Mr. Schreck.

The course has two phases: (1) A general analysis of school, college, church, and community theatre organization and management. (2) An intensive study by each student of the history, organization, and special problems of a selected theatre.

Not open to students who have credit for Speech 850.

778. Experimental Phonetics. Five credit hours. Winter Quarter. Two one-hour lecture periods and three two-hour laboratory periods each week. Prerequisite, Speech 585, 617, and 678.

Laboratory investigations of problems of phonetics as they are related to functional speech.

***781. Curricular and Instructional Adjustment for the Deaf Child.** Three credit hours. Autumn Quarter. Prerequisite, Speech 690. Mr. Morris and senior staff.

Adaptation of nursery school, kindergarten and elementary methods; planned development of language; silent reading; lip reading; outline of work for each Quarter. (To be offered in 1948-1949).

785. Advanced Clinical Practice in Speech Correction, Lip Reading, or Instruction of the Deaf. Three to fifteen credit hours. All Quarters. Three hours per week will be devoted to clinical practice for each credit hour. Prerequisite or concurrent: (1) for Speech Correction, Speech 696 and 698, (2) for Lip Reading, Speech 678 and 684, (3) for instruction of the Deaf, Speech 782. Permission of the Director of the Speech and Hearing Clinics is required. Mr. Morris and senior staff.

Clinical experience in examination, diagnosis and therapy with opportunity for field experience such as may be indicated by the student's training and desire for future professional employment or practice.

FOR GRADUATES

An undergraduate student shall not be permitted to take any courses in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

EDUCATION SURVEY COURSES

(See Courses of General Interest on page 100)

* Not given in 1947-1948.

THE UNIVERSITY SCHOOL Office, University School

ACTING DIRECTOR RAMSEYER, ASSISTANT DIRECTOR KINSELLA, PROFESSOR FAWCETT, ASSOCIATE PROFESSORS COWELL, HELLER, AND WILLIS, ASSISTANT PROFESSORS MORRIS, LOOMIS, REYNARD, SWALES, VERBECK, COUTANT AND HANNA, INSTRUCTORS, AND ASSISTANTS

The functions of the Department of The University School are: to provide a laboratory in which students in the College of Education may observe and study modern secondary and elementary school practice; to provide a laboratory in which certain selected graduate students may do intensive study of the philosophy and methods of modern education; to offer to teachers and administrators of the State of Ohio opportunity for intimate observation of the practices named above; to provide to faculty members in the College of Education opportunity for current observation of children in a school situation, and hence for the securing of abundant and new illustrative material for theory courses. Consequently, special provision is made for study and observation through the services of staff members who act as interpreters to student groups and to visiting school faculties who ask for such services; by the provision in office staff and routine for attention to visitors desiring to observe certain types of students, specific areas of instruction, or designated teachers; through the preparation of typical forms and reports for inspection by visitors; and through lectures by and conferences with staff members. Further service is given through published reports, exhibits of student work, and certain student-written publications. The School affords an opportunity for a limited number of teachers from the field and graduates without experience to work in the School as "assistants." Teachers interested in such "assistantships" should address an inquiry to the Director of the University School.

VOCATIONAL EDUCATION (See Education)

ZOOLOGY AND ENTOMOLOGY Office, 101 Botany and Zoology Building

PROFESSORS SNYDER, DeLONG, PETERSON, KENNEDY, D. F. MILLER, PRICE, KOSTIR, DETHIER, AND RIFE, ASSOCIATE PROFESSORS DUNHAM, J. A. MILLER, HAUB, KNULL, DAVIDSON, GREEN, AND DAMBACH, ASSISTANT PROFESSORS TIDD, BORROR, VENARD, PADDOCK, J. N. MILLER, AND LEEDY, MR. PUTNAM, MR. PETRIDES, AND ASSISTANTS

ZOOLOGY

401-402. General Zoology. Five credit hours. Two Quarters. Both 401 and 402 are given Autumn, Winter, Spring. Five lecture-laboratory periods each week. Staff and assistants.

A course intended to give the student a general view of the nature of animal life and to point out its relation to man's economic and social activities. The chief topics considered are as follows: nature and structure of living substance, food and its energy transformations, the essentials of reproduction; a review of the animal groups with special stress on useful and harmful qualities; animal distribution and relation to environment; heredity and evolution with particular stress upon their relation to human affairs.

403. General Principles of Heredity. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lectures each week. Prerequisite, Zoology 401-402 or Botany 401-402 or equivalent. Mr. Snyder, Mr. Rife, Mr. Green, Mr. Paddock.

A study of the principles of heredity, to serve as a basis for advanced work in animal and

† In this group are included not only many enrolled for graduate work in the University, but some hundreds of teachers and other educators who each year spend time in the school.

plant breeding, and as a necessary background for those majoring in the biological sciences or preparing to enter allied professional fields such as agriculture, medicine or veterinary medicine. Demonstrations of living animals and plants are frequently used, and discussions of the principles and problems of genetics are conducted daily. Hereditary characteristics in man are used whenever feasible as a basis for discussion.

Not open to students who have credit for Zoology 412.

408. Ornithology. Three or five credit hours. Spring Quarter. One lecture, one laboratory period, and one field trip each week. Prerequisite, Zoology 401-402 or ten hours of biology. Mr. Borror.

A study of the structure, classification, and habits of birds, with emphasis on their identification and economic importance. Several field trips during the Quarter, on Saturdays or Sundays.

412. Heredity and Racial Groups. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lectures each week. Mr. Rife.

A course especially designed for students who do not intend to major in the biological sciences. A study of the inheritance of physical and mental variations in human beings, and their distributions in different populations. The interaction of heredity and environment is given careful consideration, and a scientific basis is laid for the study and analysis of racial variations. Analysis and comparisons of individual variations within the students in the class are made, including such traits as blood groups, dermatoglyphics, and handedness.

Not open to students who have credit for Zoology 403.

509. Evolution. Five credit hours. Spring Quarter. Five lecture-discussion periods each week. Prerequisite, Botany 401-402 or Zoology 401-402 or equivalent. Mr. Tidd.

The principles of organic evolution. Demonstrations and discussion of the facts and theories underlying the evolution of man and other living things.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

According to the University regulations, courses in this group are not open to Freshmen or Sophomores.

609. Animal Microtechnic. Three or five credit hours. Spring Quarter. A laboratory course. Laboratory work, assigned readings, and conferences. This course is designed for students intending to major in one of the biological sciences. Prerequisite, Zoology 401-402 or equivalent and three Quarters of chemistry. Limited to twelve students and permission of the instructor must be obtained before registering for this course. Mr. Kostir, Mr. J. N. Miller.

Theory and practice of microscopic methods, including fixing, embedding, section, and staining of animal tissues, making permanent preparations, and special manipulation of the microscope and its accessories.

617. General Cytology. Three or five credit hours. Winter Quarter. Three lectures and two two-hour laboratory periods each week. Permission of the instructor must be obtained before registering. Mr. Kostir.

A study of protoplasm, the organization of living cells and the fundamental phenomena of life.

618. The Cytological Basis of Genetics. Three or five credit hours. Autumn Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Zoology 403 or equivalent. Permission of the instructor must be obtained for this course. Mr. Paddock.

This course takes up the reasons why chromosomes behave as they do during mitosis and meiosis, and points out how certain features of this behavior account for known genetics phenomena.

620. Advanced Zoology of Vertebrates. Five credit hours. Spring Quarter. Three lectures and two two-hour laboratory periods each week. Prerequisite, Zoology 401-402, or equivalent. Zoology 509 and one Quarter in comparative anatomy are also desirable. Mr. Price.

A study of the various vertebrate groups, emphasizing their origin, phylogeny, classification, life histories, habits, distribution, and economic importance. Laboratory, museum, and field work. Especially recommended for students specializing in biological science.

625. Advanced Zoology of Invertebrates: The Protozoa. Five credit hours. Autumn Quarter. Two lectures and three two-hour laboratory periods each week. Prerequisite, Zoology 401-402 or equivalent. Mr. Kostir.

Zoology 625, 626, 627 are fundamental courses designed to give the student a general knowledge of the structure, life histories, habits, and relationships of the invertebrate animals. It is not essential that these courses be taken in any particular order, and any one of the three may be elected independently of the others. Course 625 deals with the protozoa, including both free-living and parasitic forms.

626. Advanced Zoology of Invertebrates. Five credit hours. Winter Quarter. Two lectures and three two-hour laboratory periods each week. Prerequisite, Zoology 401-402 or equivalent. Given in alternate years. Mr. Kostir.

A study of the structure, life histories, habits, and relationships of sponges, coelenterates, worms, and arthropods, together with the consideration of important biological principles illustrated by these groups. Note statement under Zoology 625.

***627. Advanced Zoology of Invertebrates.** Five credit hours. Winter Quarter. Two lectures and three two-hour laboratory periods each week. Prerequisite, Zoology 401-402 or equivalent. Given in alternate years. Mr. Kostir.

A study of the structure, life histories, habits, and relationships of molluscs, echinoderms, brachiopods, and bryozoa, together with the consideration of important biological principles illustrated by these groups. Note statement under Zoology 625.

NOTE: TEACHING COURSES. For the Teaching Course in this department see the Department of Education, Course 683.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENTOMOLOGY

450. General Entomology. Five credit hours. One Quarter. Autumn, Winter, Spring. Five lecture-laboratory periods each week. Mr. DeLong, Mr. Davidson, and assistants.

An introductory course in entomology with emphasis on the economic importance of insects; the principles of insect control; and a survey of the orders and families of insects with reference to the biology and habits of the most important groups. This course is especially recommended for students in the College of Arts and Sciences and Education, who intend to teach biology, or who wish an introduction to the study of insects.

Qualified students may confer with the instructor regarding the taking of individual proficiency examinations leading to advanced standing in entomology.

Not open to students who have credit for Entomology 550.

FOR GRADUATES

An undergraduate student shall not be permitted to take any course in the "800" group except by permission of the Graduate Council.

For description of graduate courses in this department see the Bulletin of the Graduate School.

* Not given in 1947-1948.

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